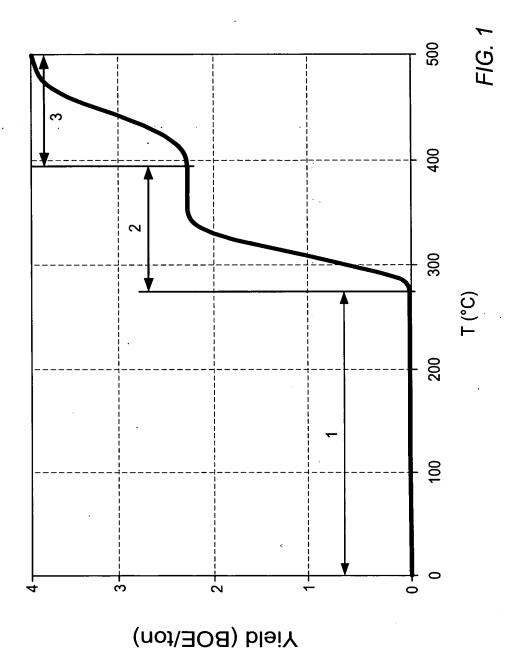
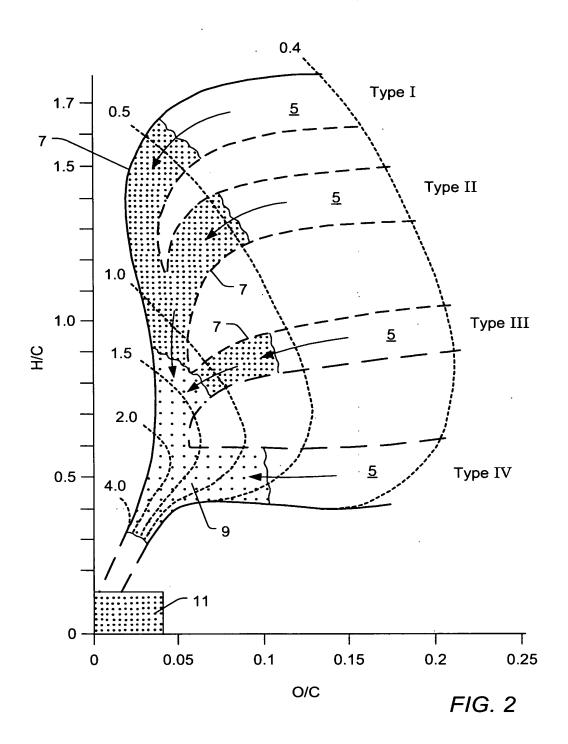
FEB 0 9 2006

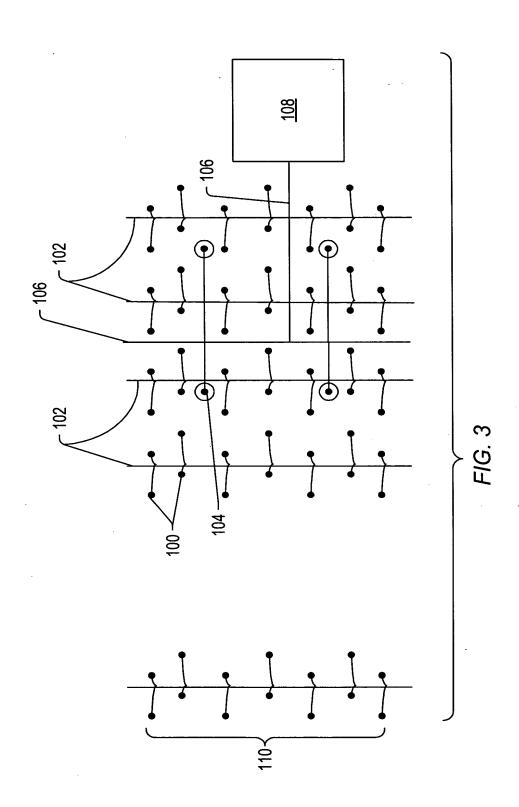
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

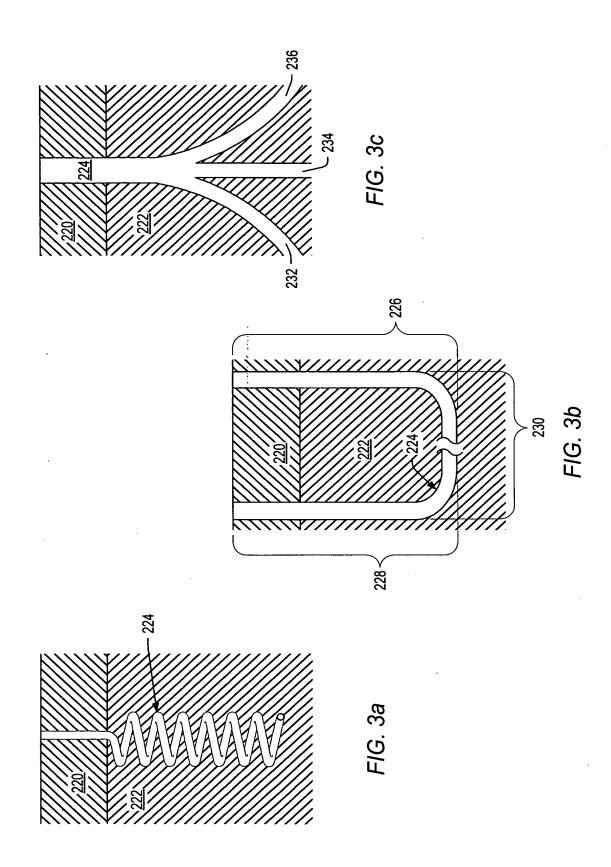
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

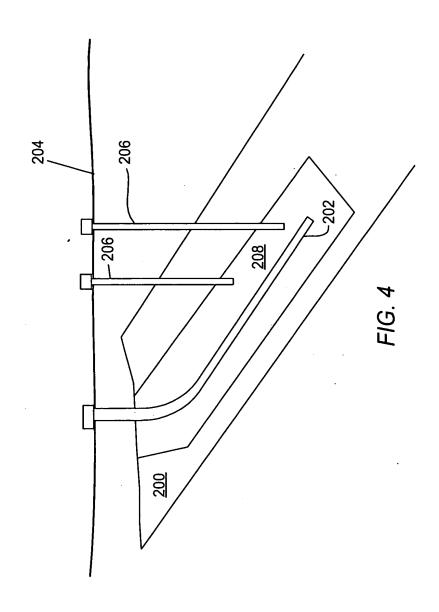


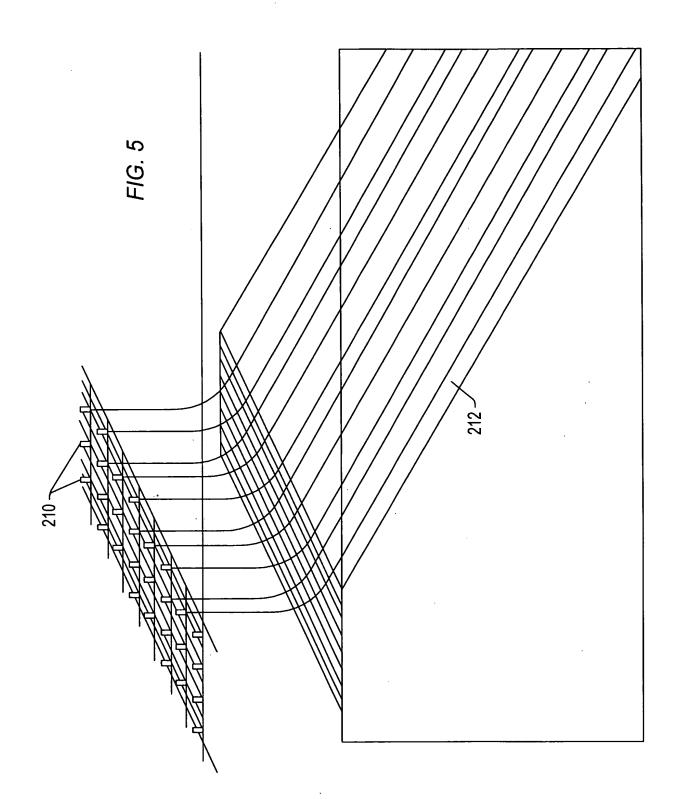
Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632











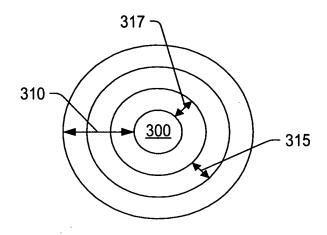


FIG. 6

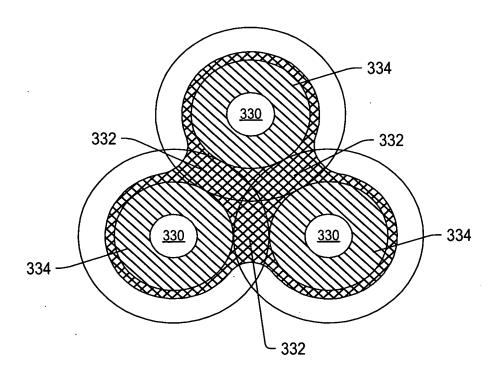
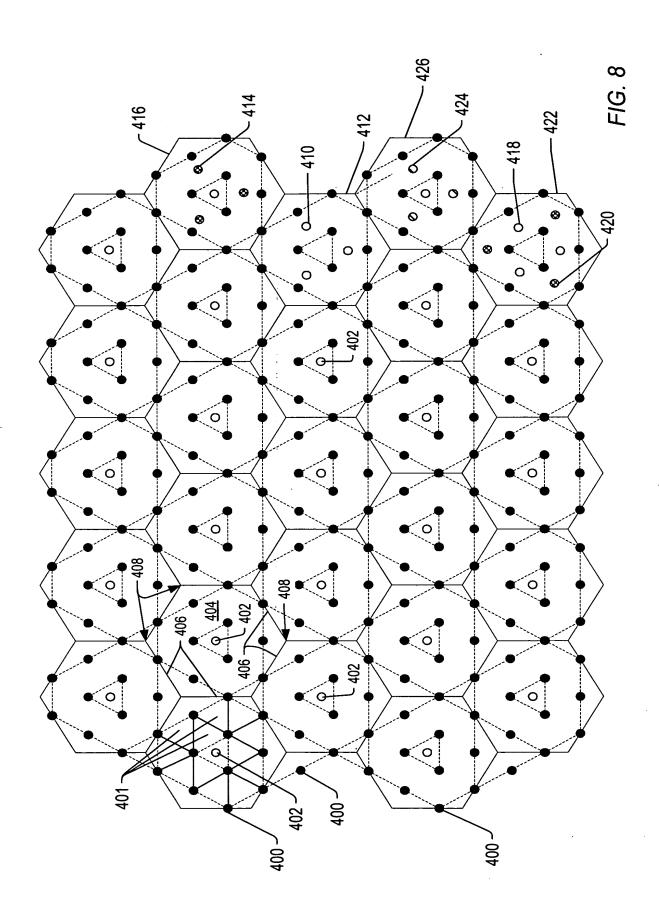
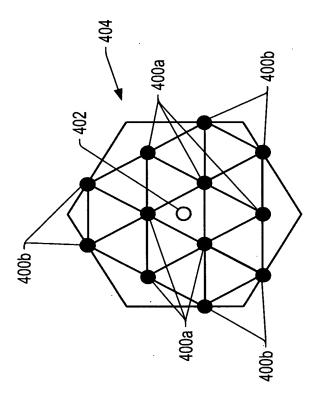
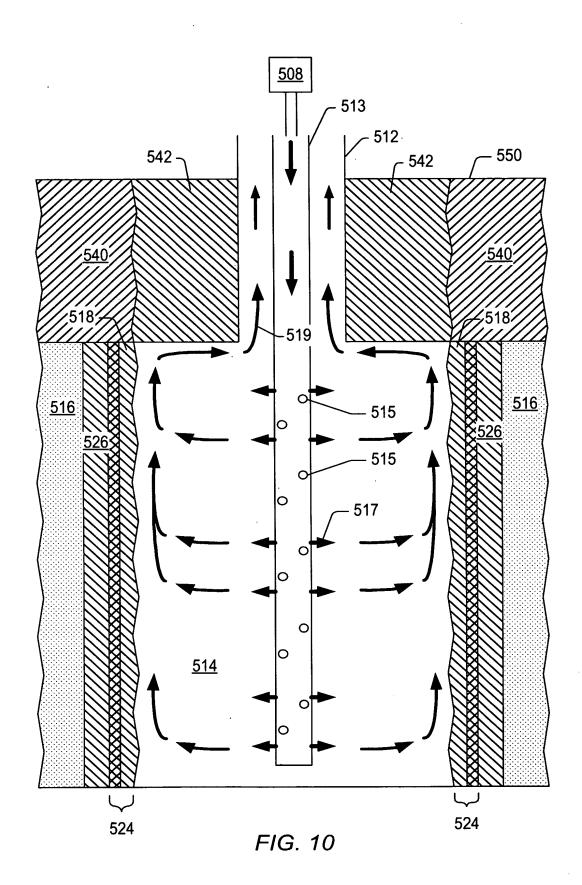


FIG. 7







Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

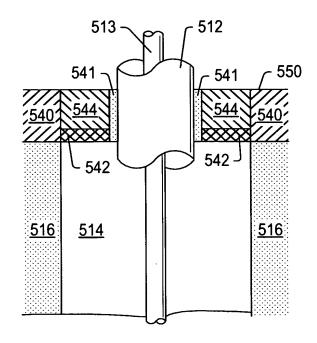


FIG. 11

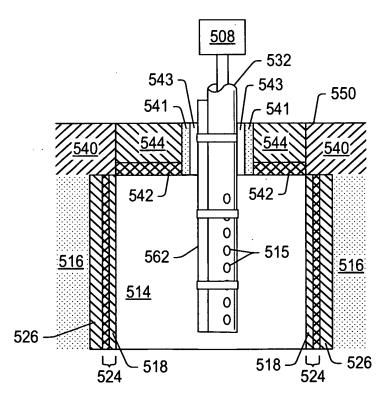


FIG. 12

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

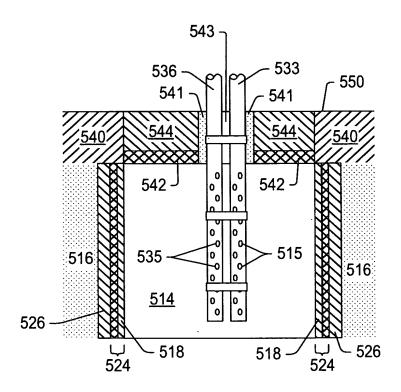


FIG. 13

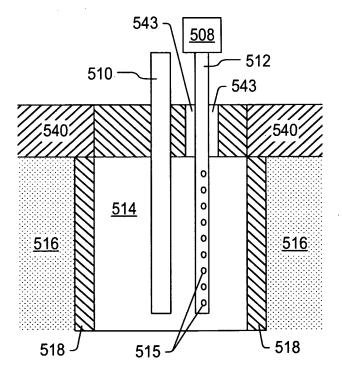


FIG. 14

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

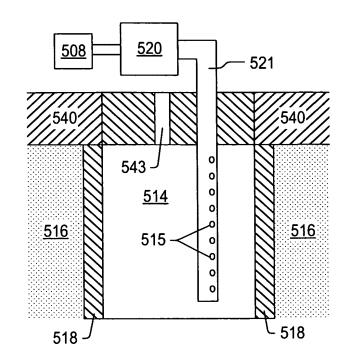
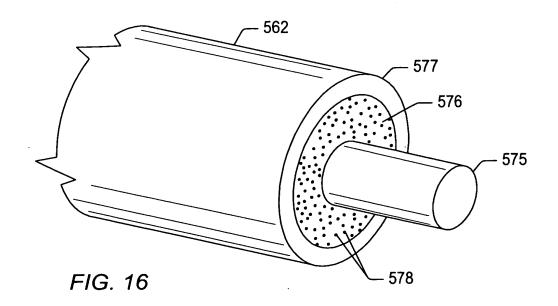


FIG. 15



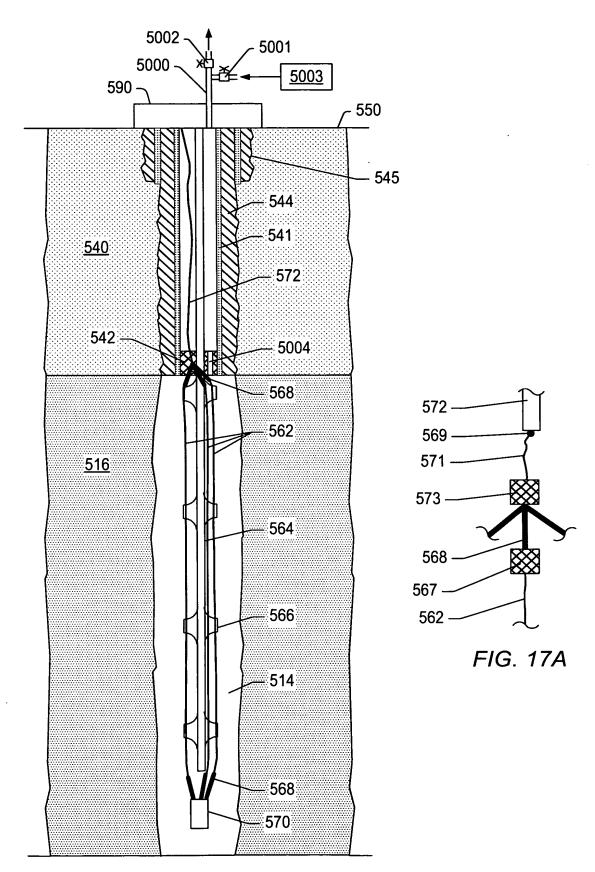
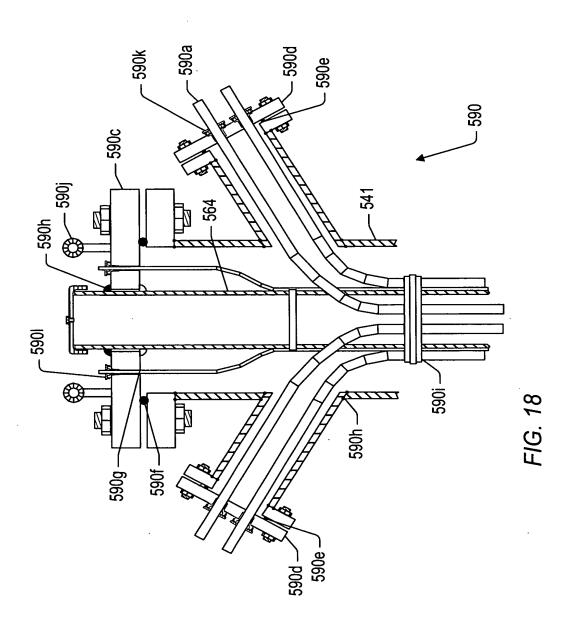


FIG. 17

Title:



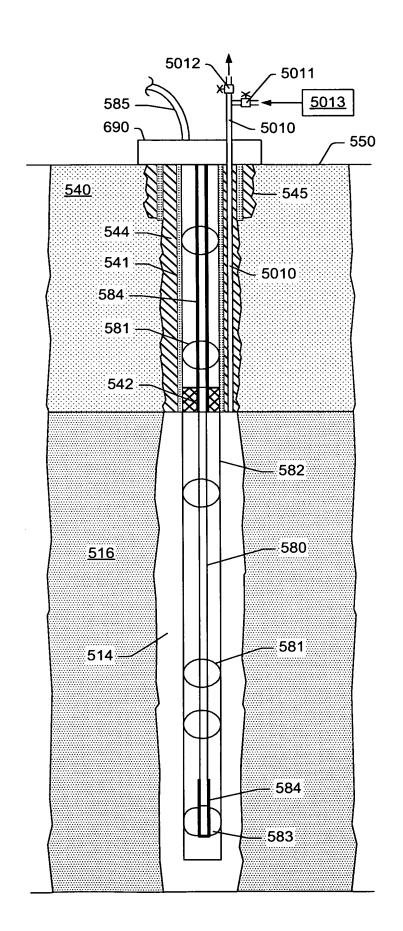
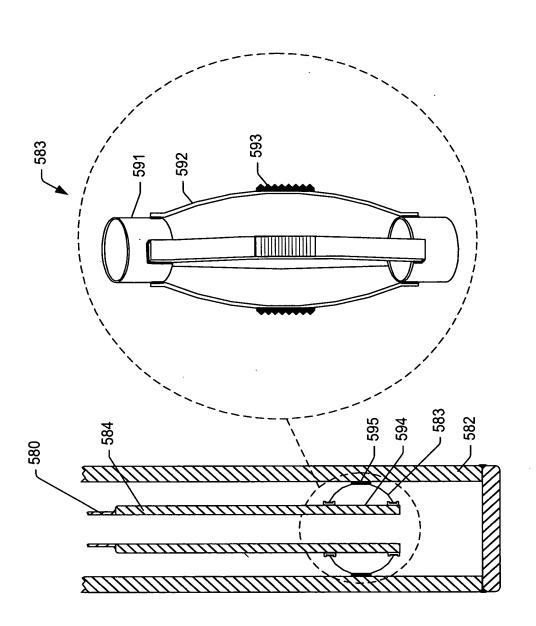


FIG. 19



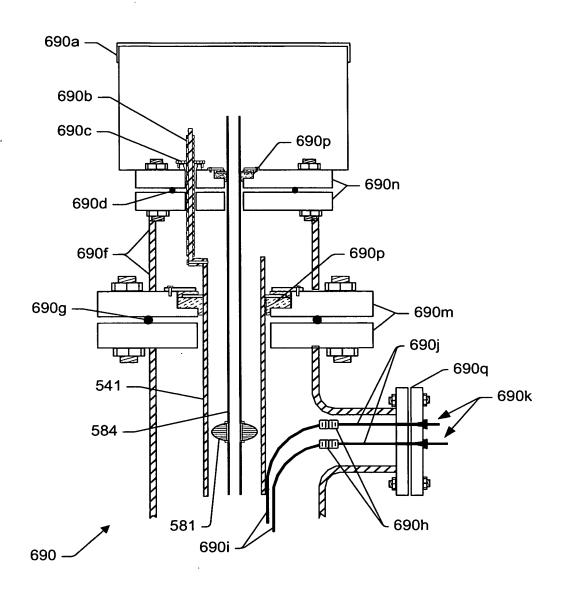


FIG. 21

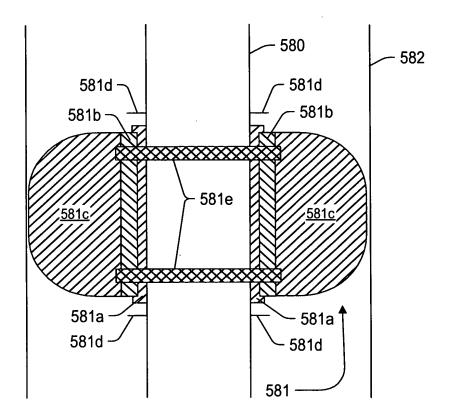


FIG. 22

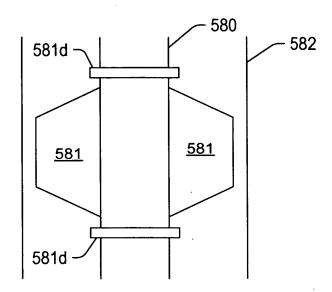


FIG. 23a

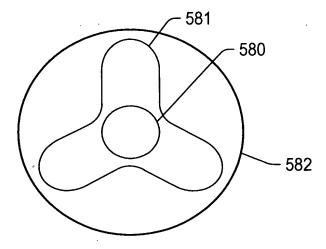


FIG. 23b

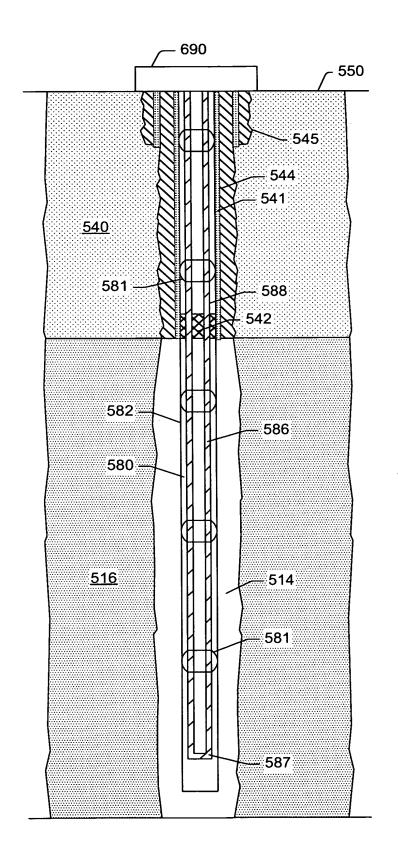


Fig. 24

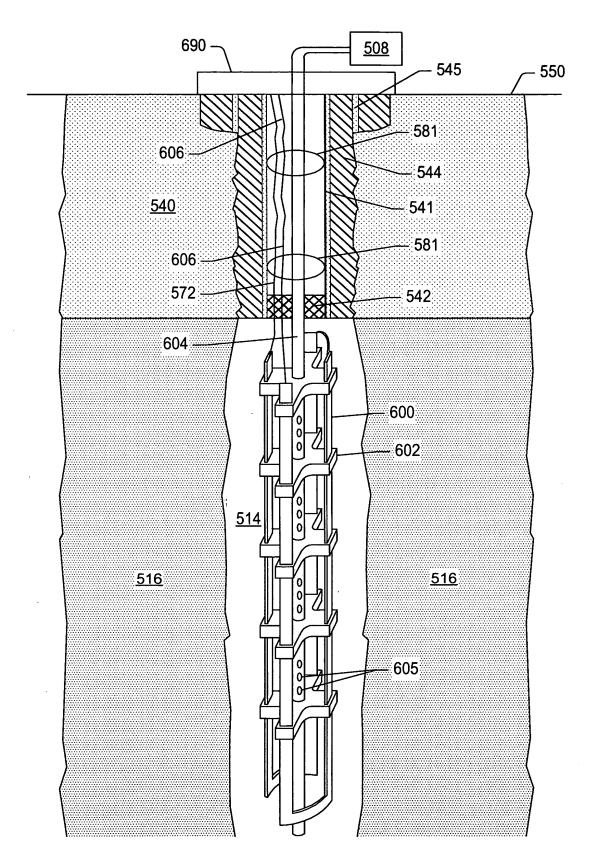


FIG. 25

Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

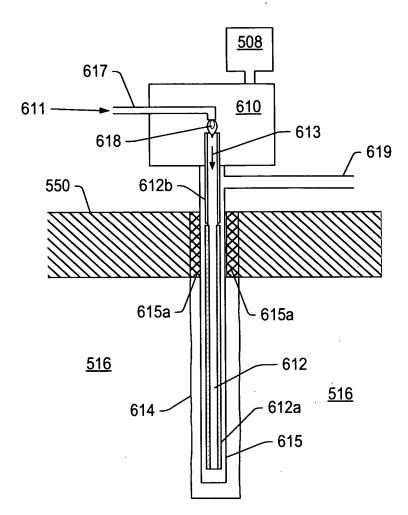


FIG. 26

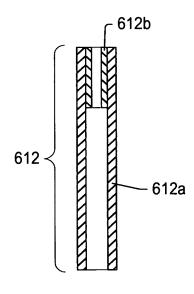


FIG. 27

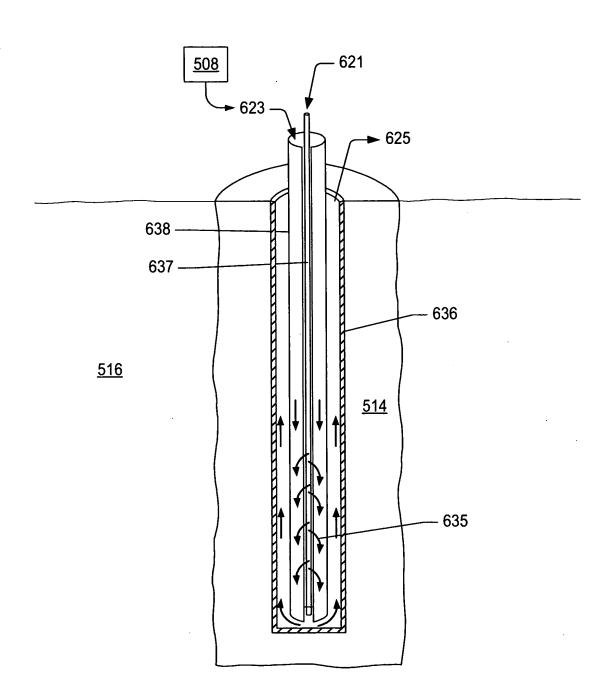


FIG. 28

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

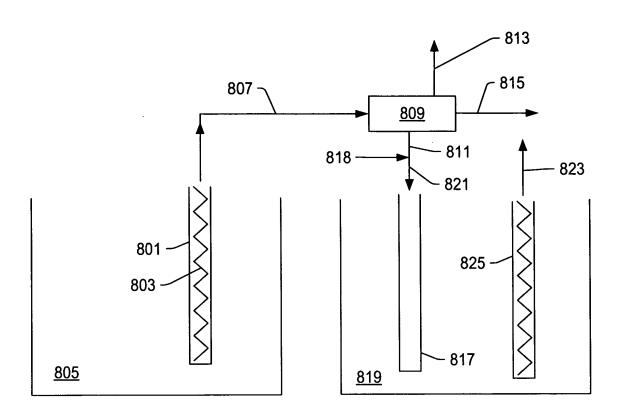


FIG. 29

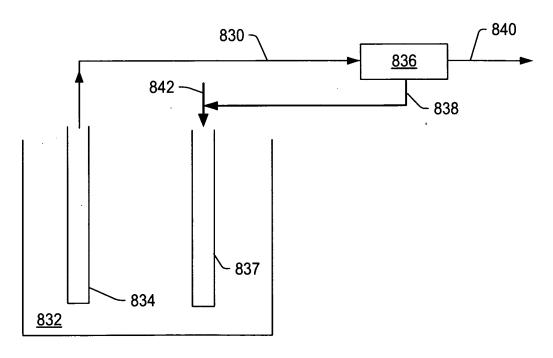


FIG. 30

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

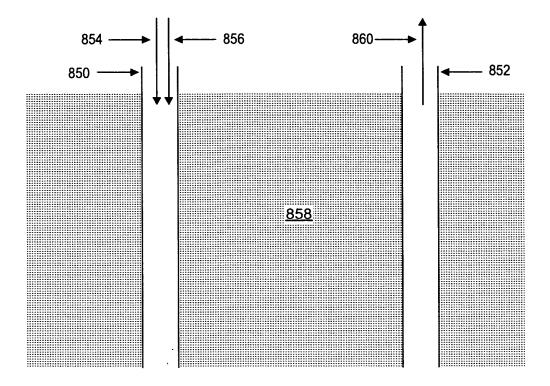
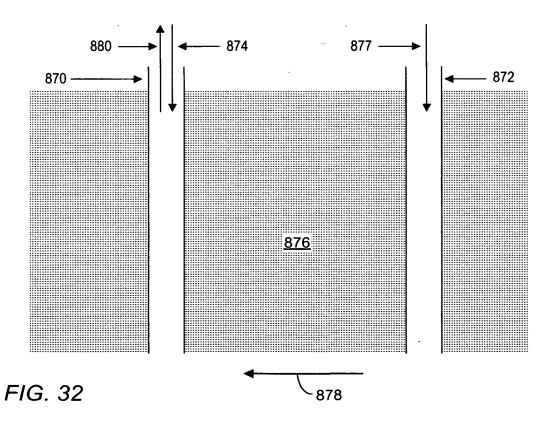


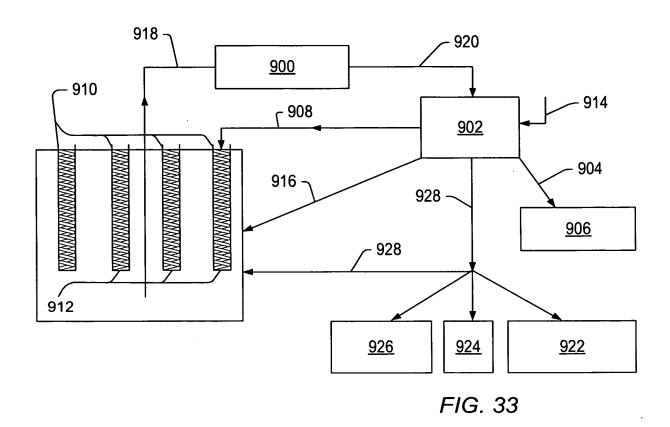
FIG. 31



Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



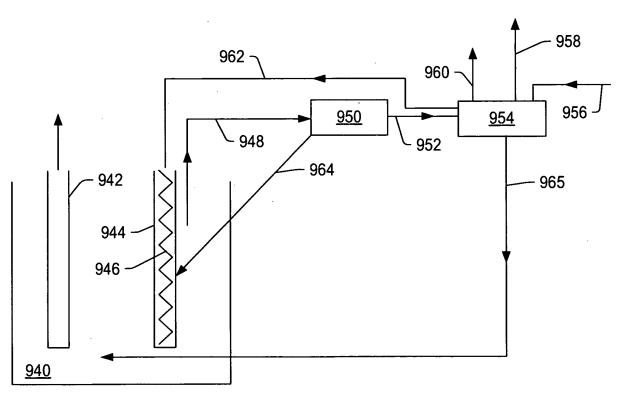


FIG. 34

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632

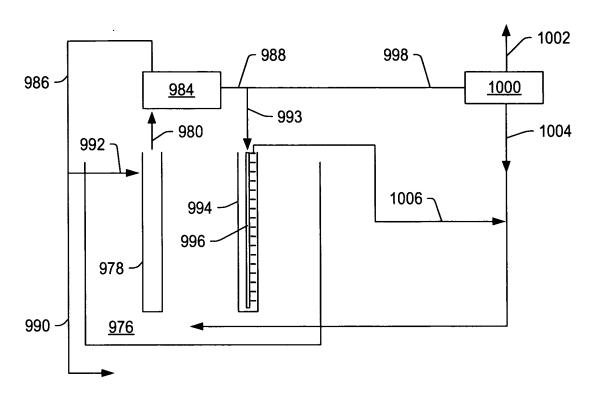
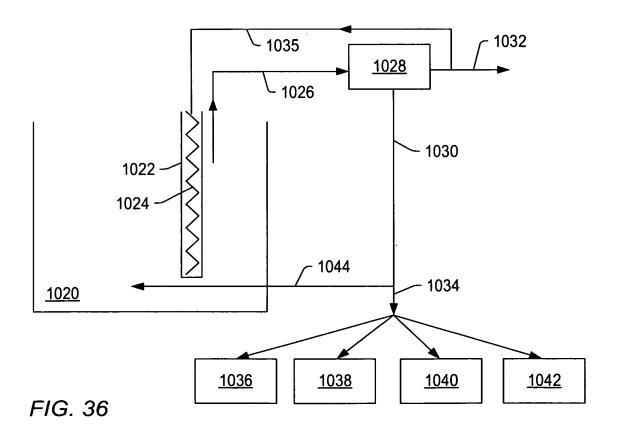


FIG. 35



Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

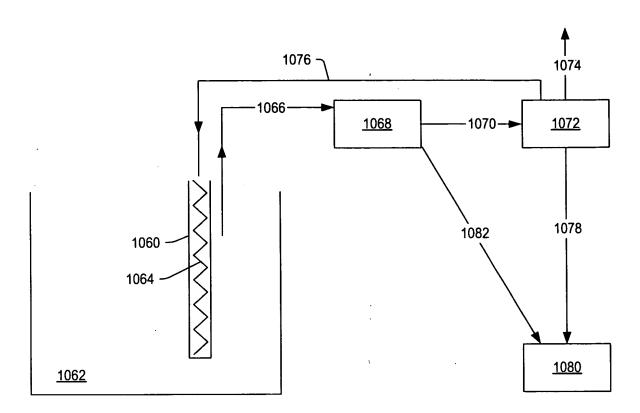


FIG. 37

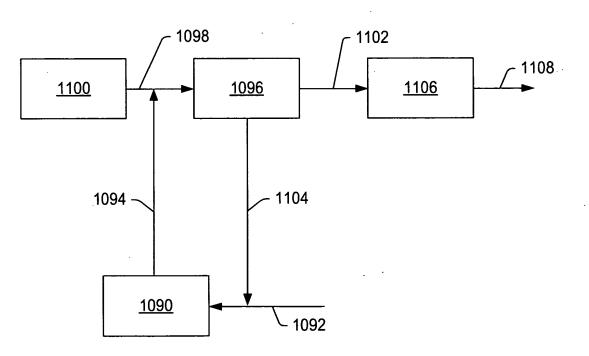
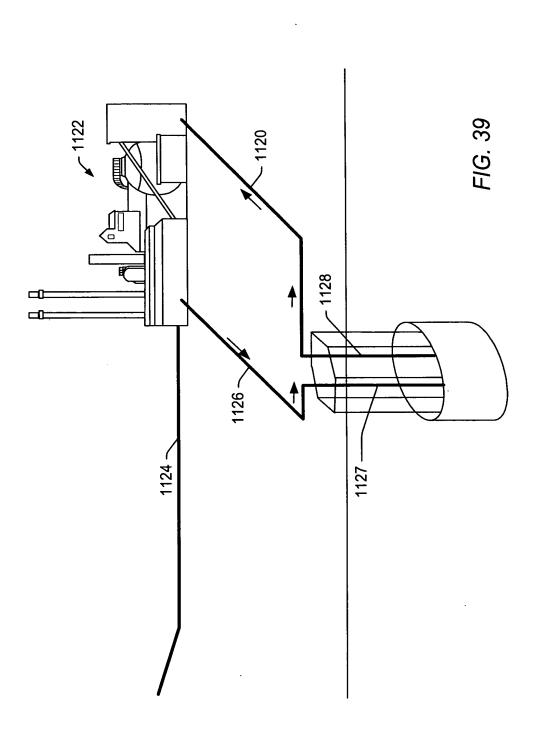
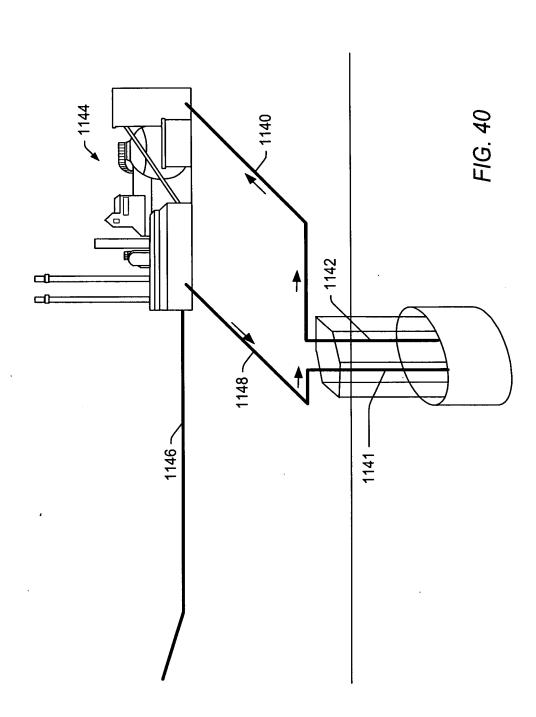
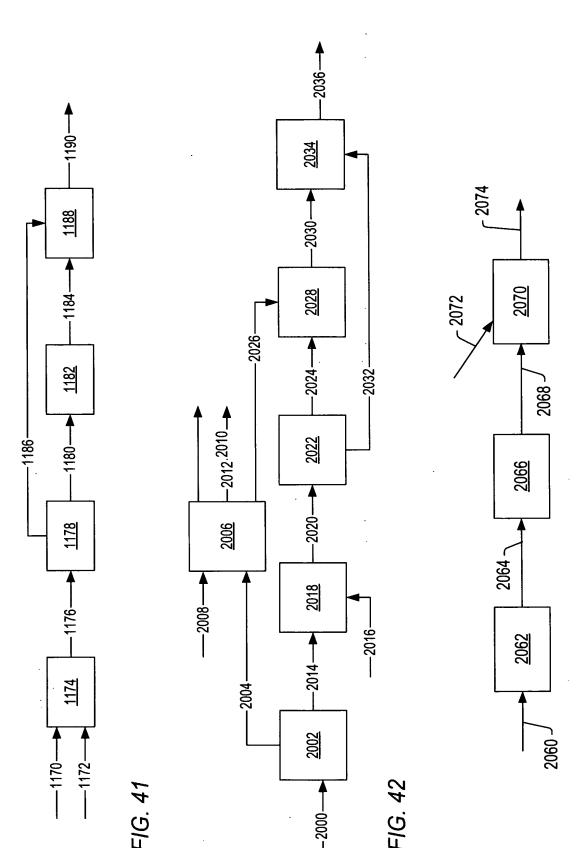
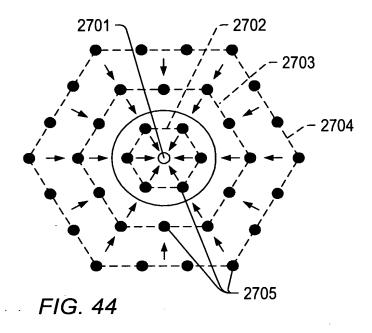


FIG. 38









Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

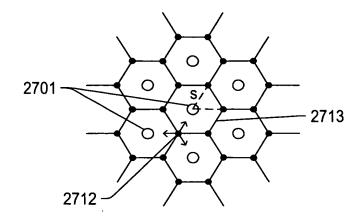


FIG. 45

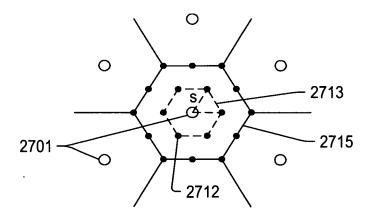


FIG. 46

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

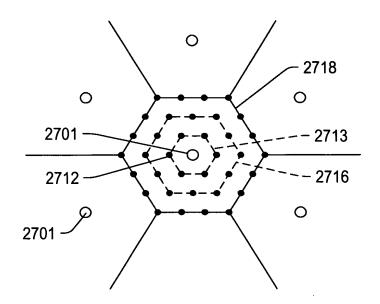


FIG.47

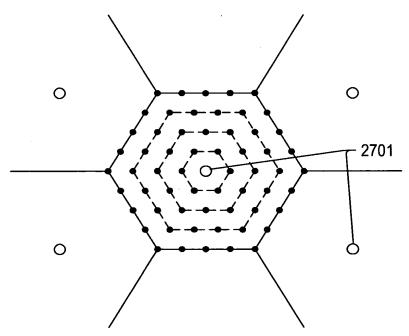


FIG. 48

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

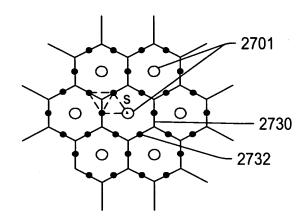


FIG. 49

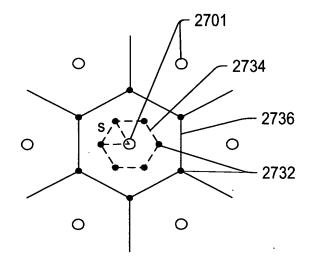
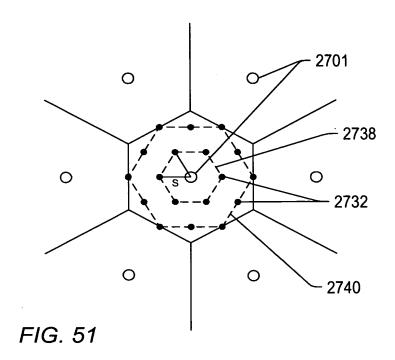
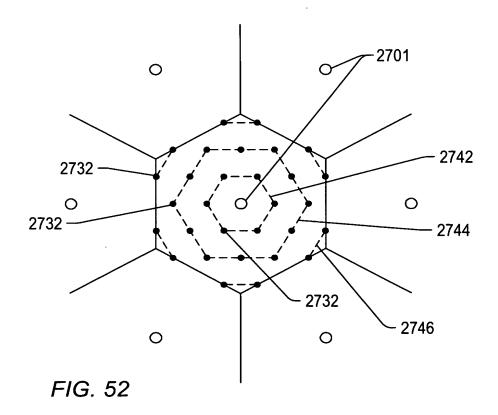


FIG. 50





PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. Title:

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

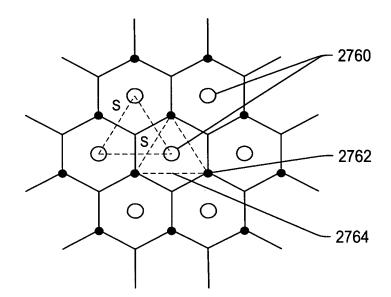


FIG. 53

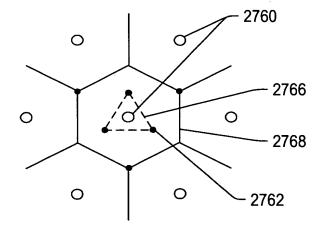


FIG. 54

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

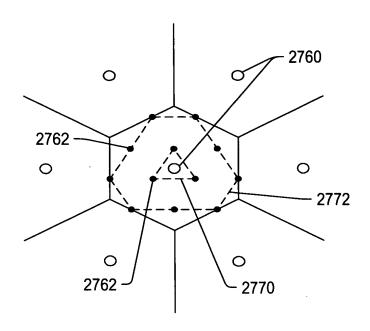
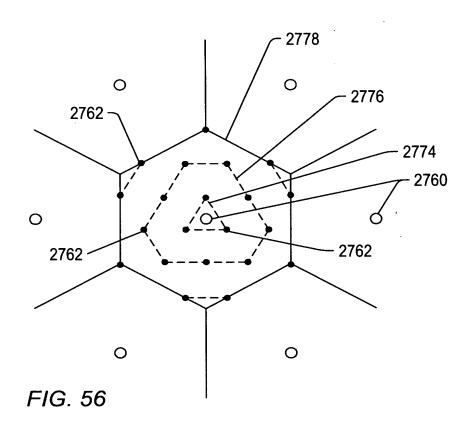
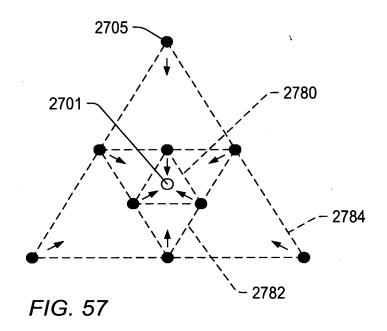
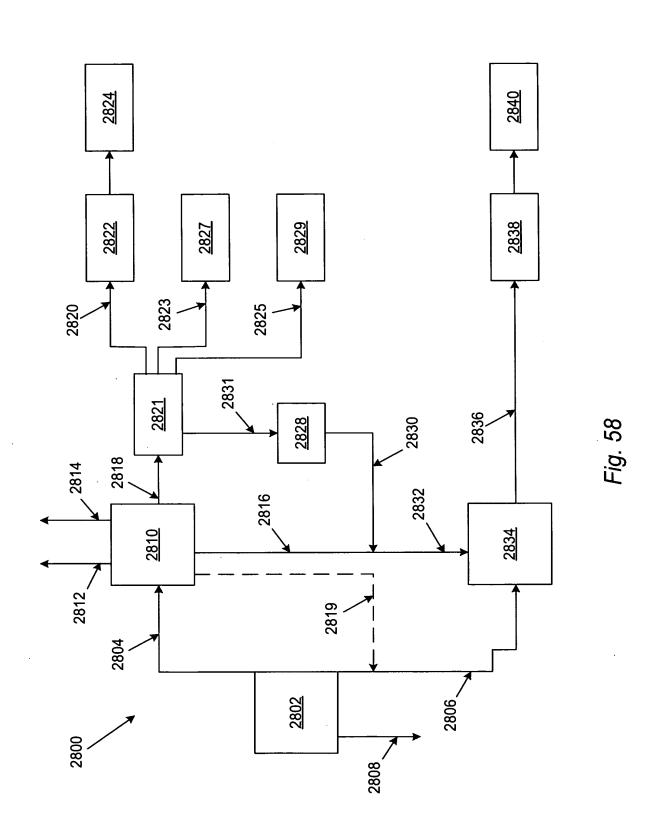


FIG. 55

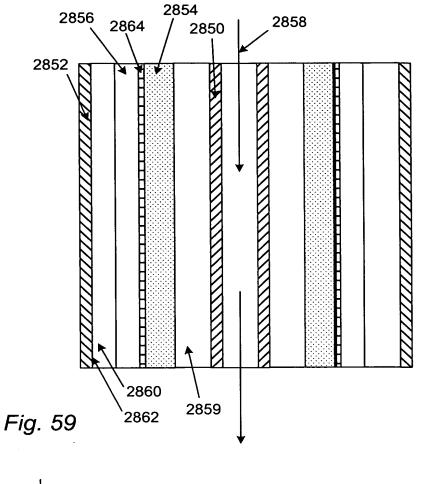


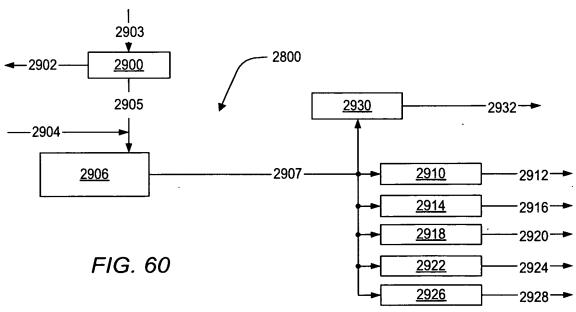




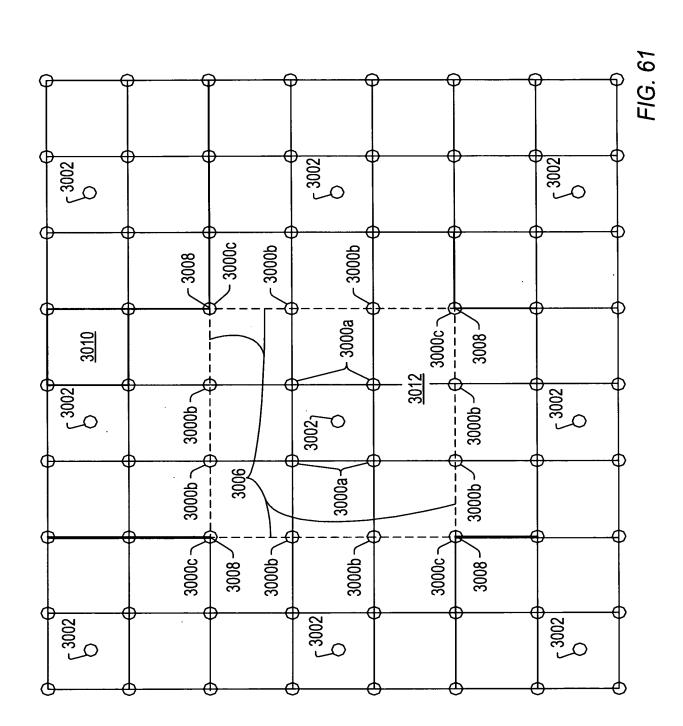
Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632





Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

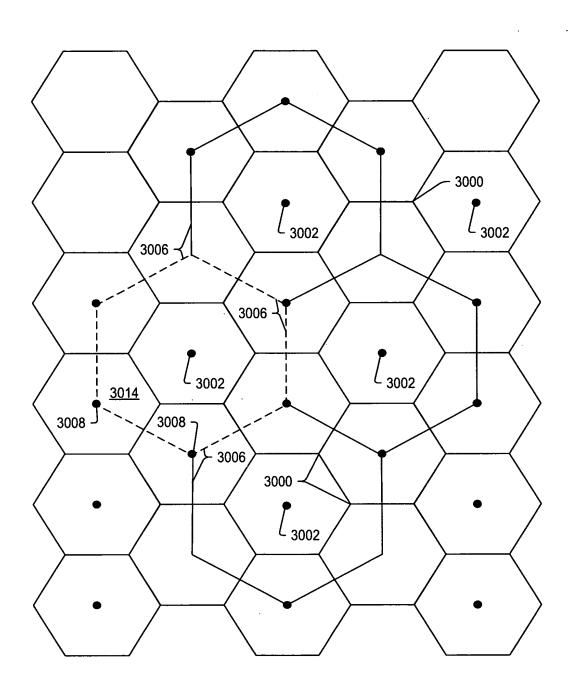


FIG. 62

U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

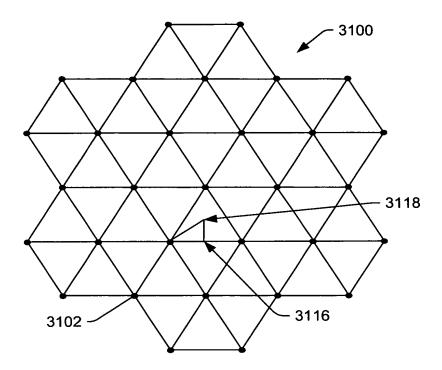
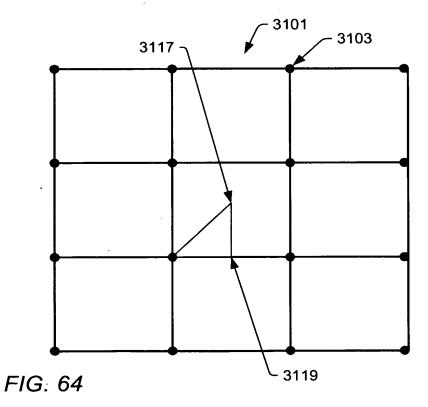
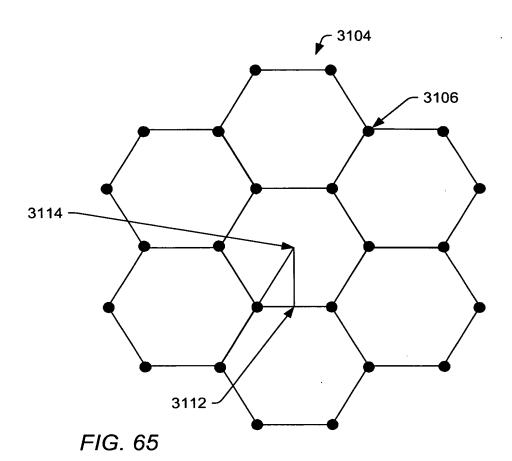


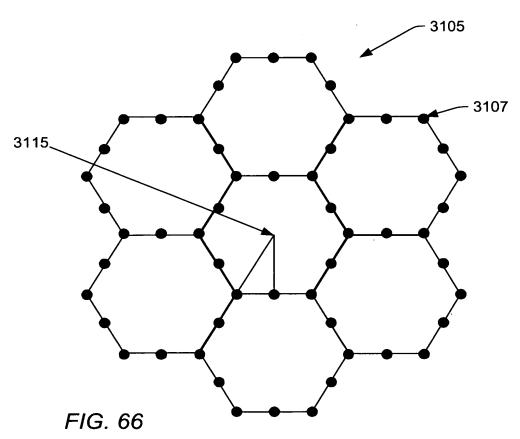
FIG. 63



Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.

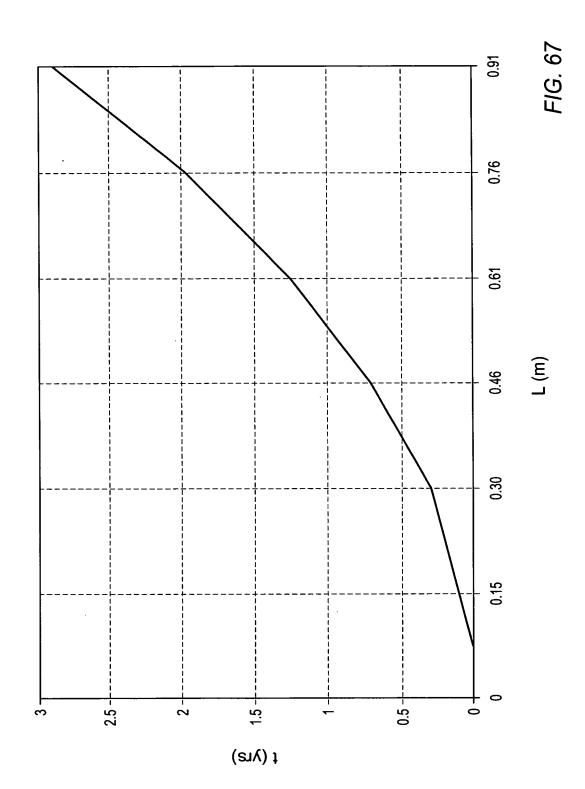
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

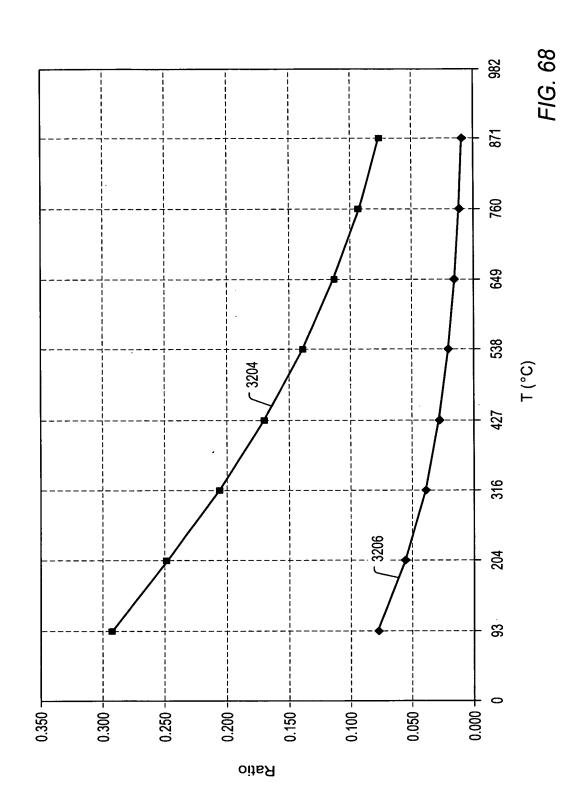




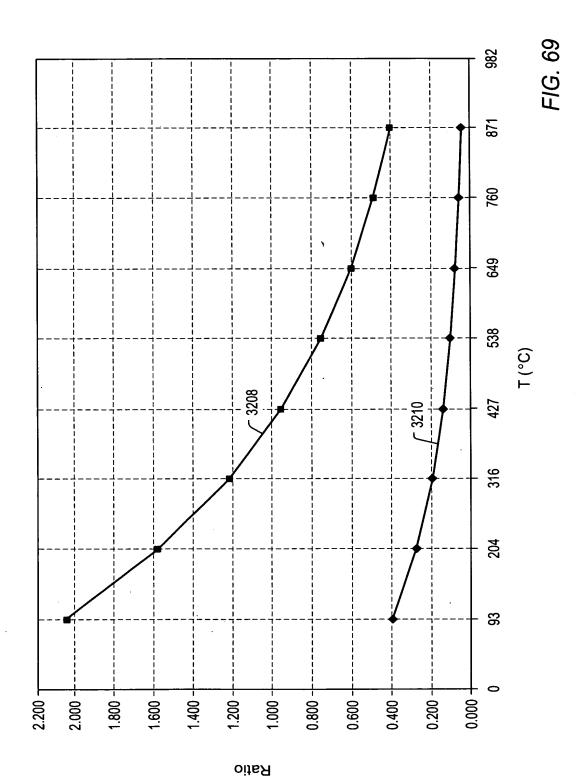
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. Title:

U.S. Pat. Appl. No.: 09/841,632

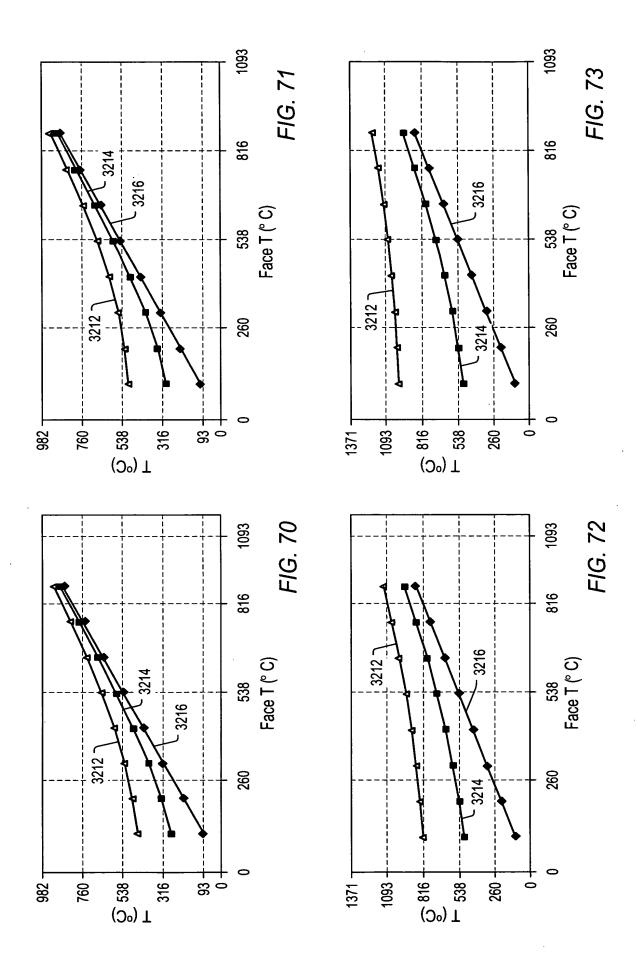




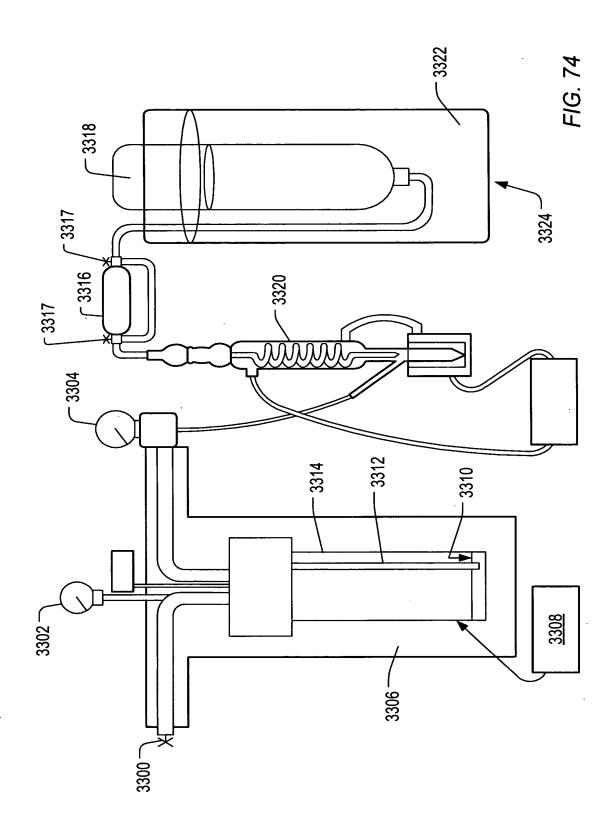
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Title: Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

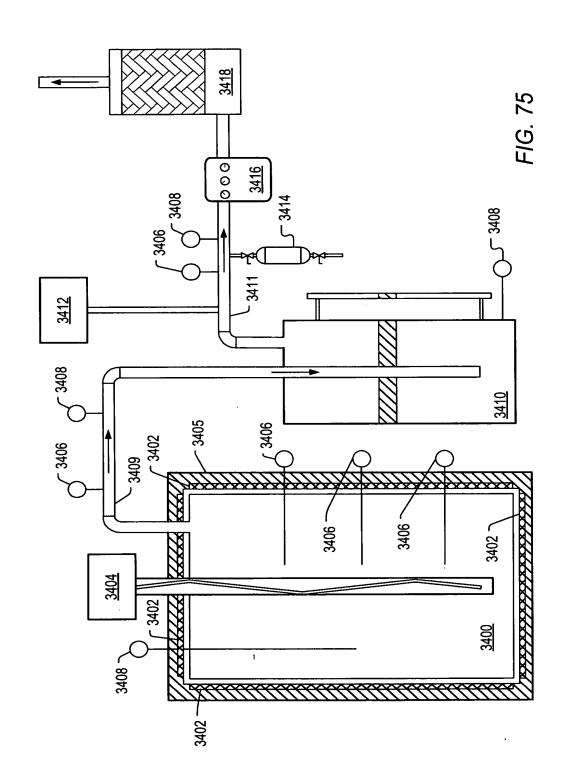


PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet Title:

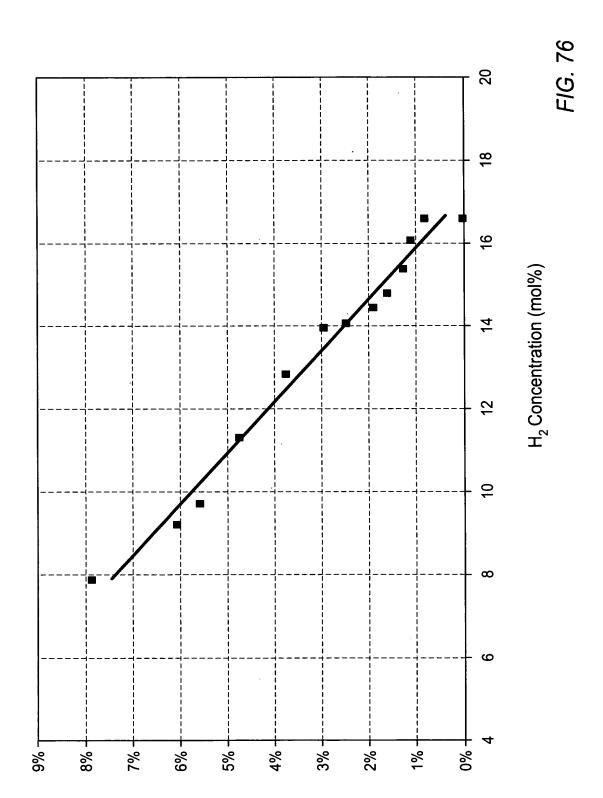


Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



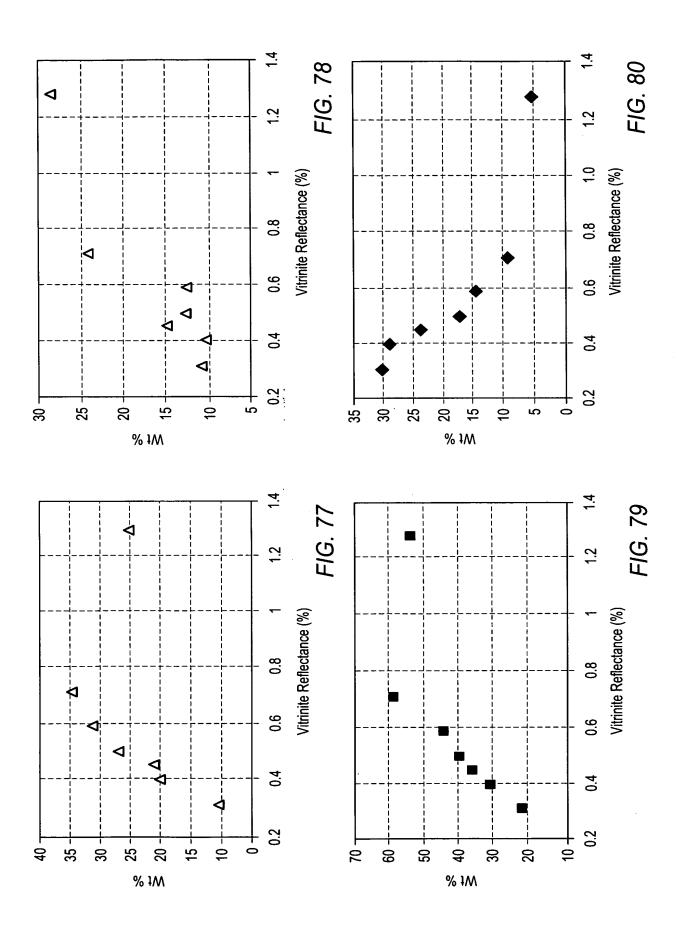
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet



Ethene/Ethane Molar Ratio

PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632

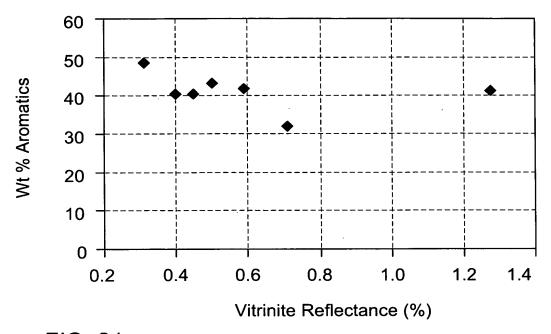


FIG. 81

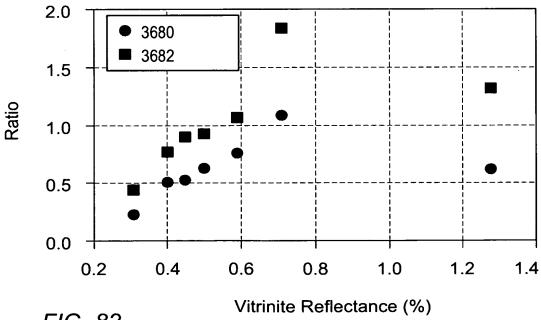
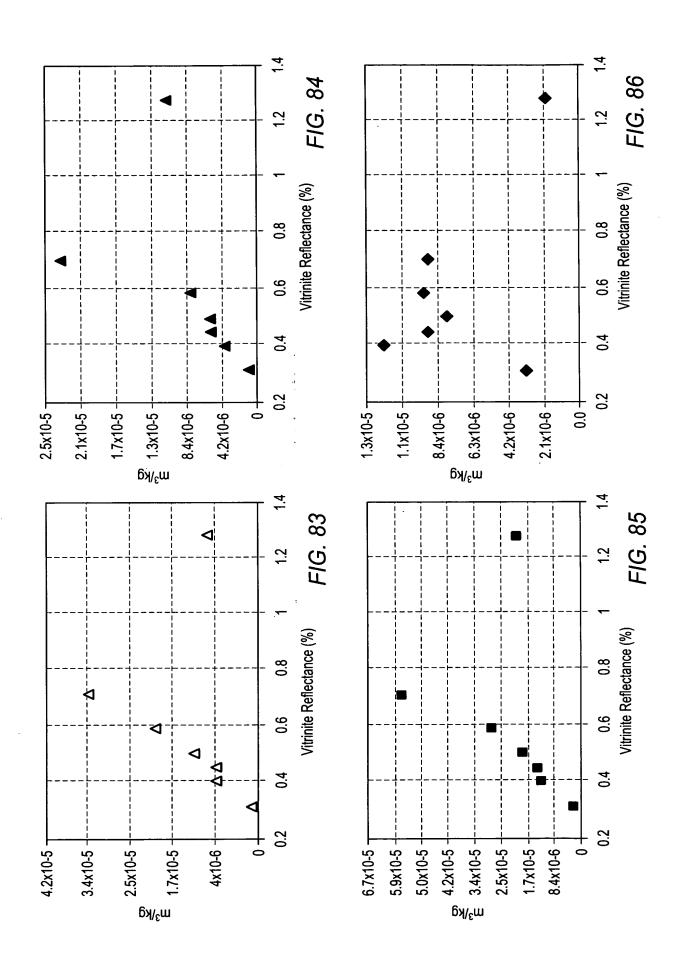


FIG. 82

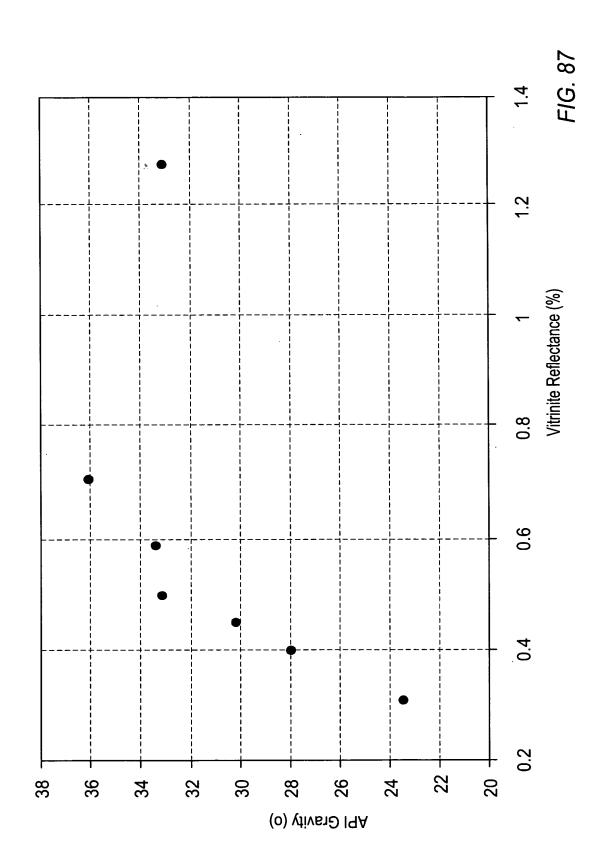
Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

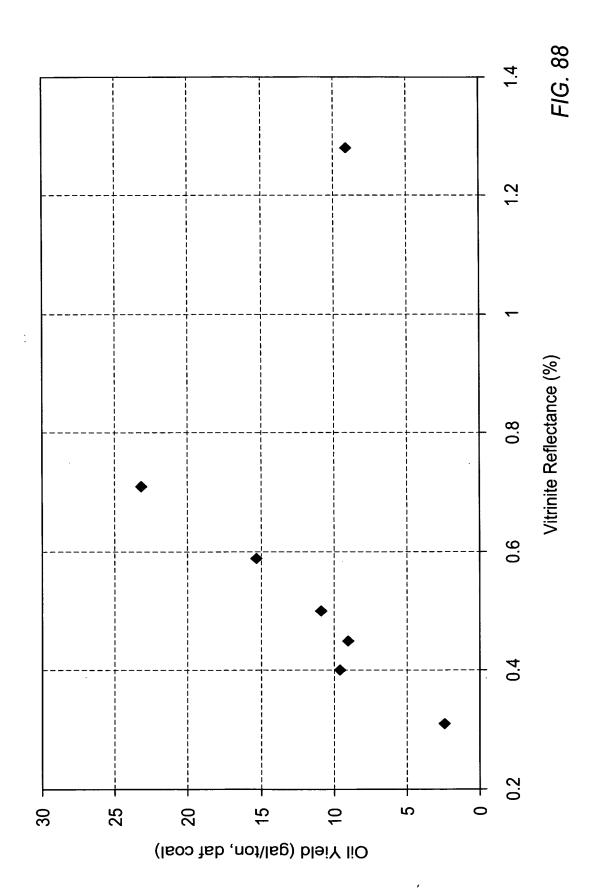
Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

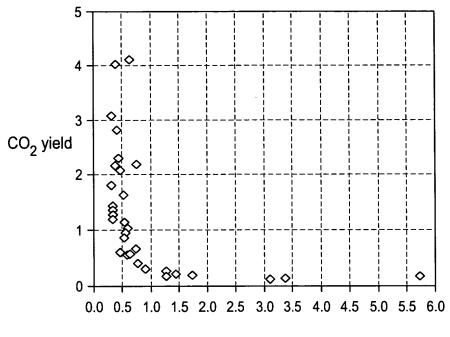
Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



Inventors: Vinegar et al.

U.S. Pat. Appl. No.: 09/841,632



Vitrinite Reflectance

FIG. 89

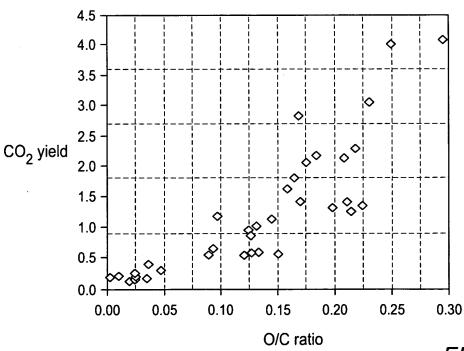
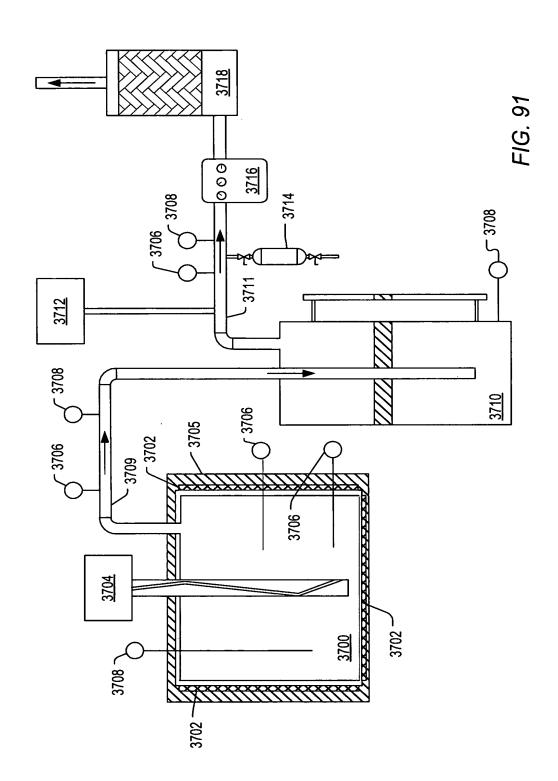
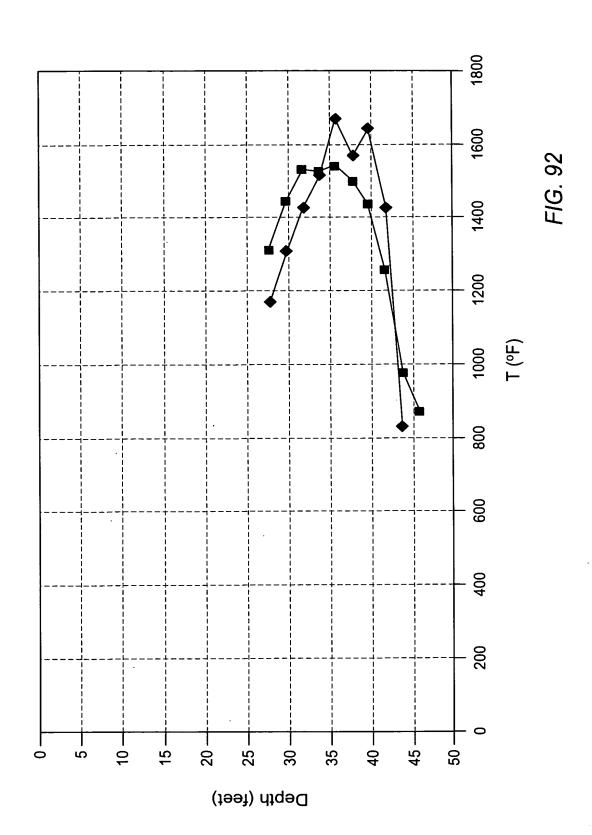


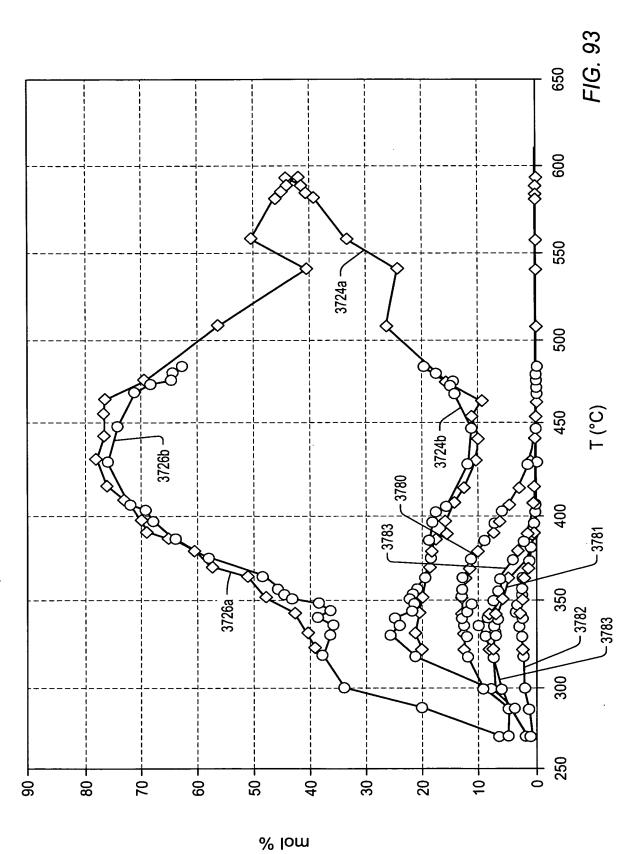
FIG. 90

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

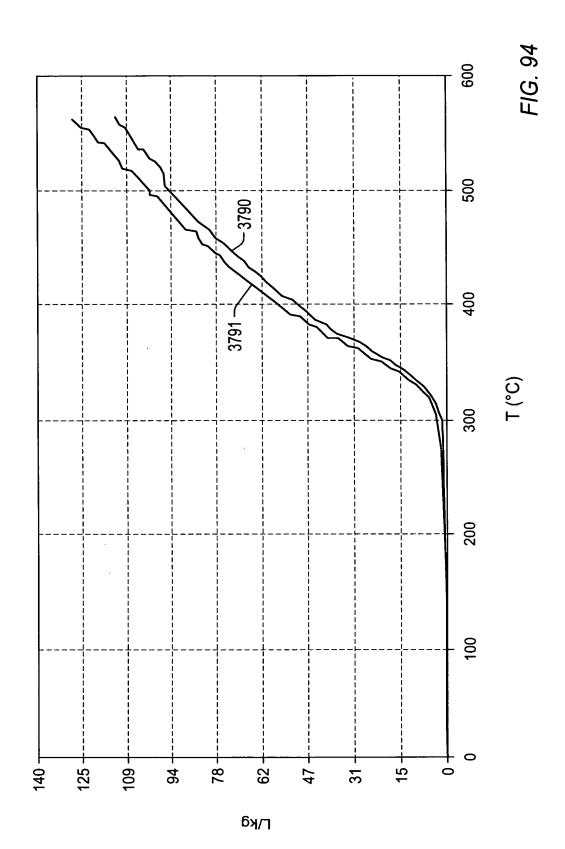


PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

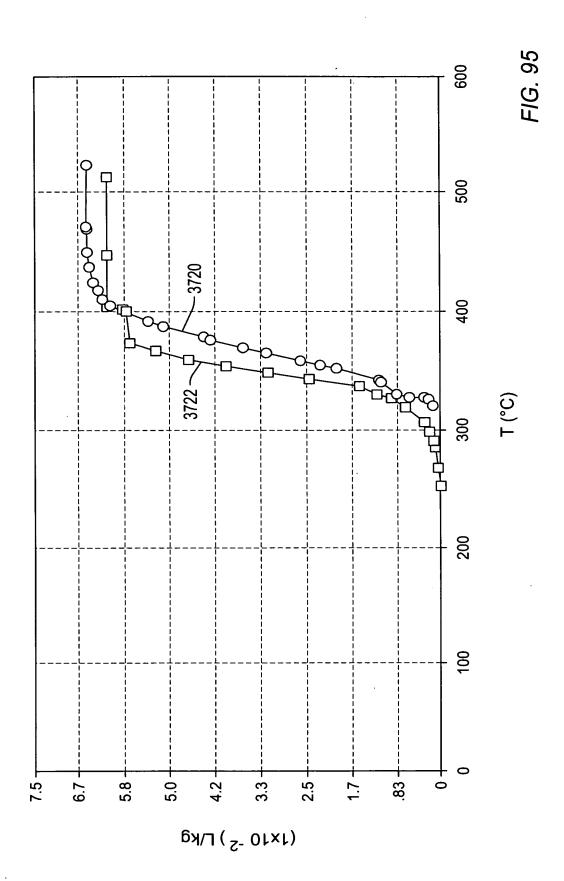




PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet



Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



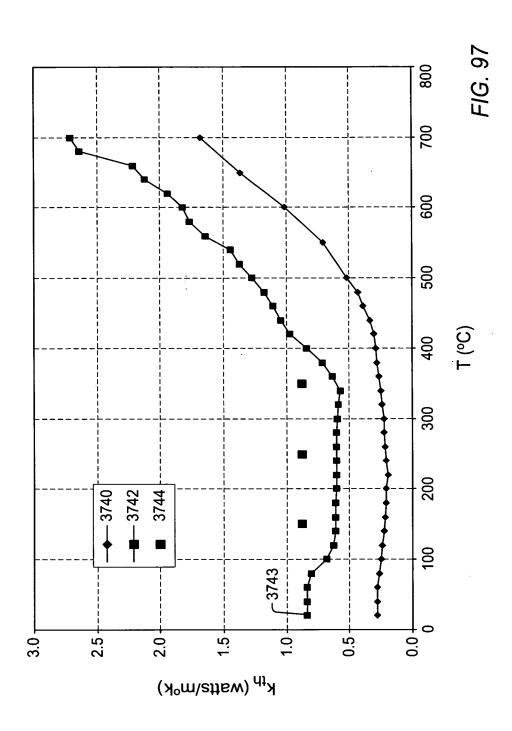
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

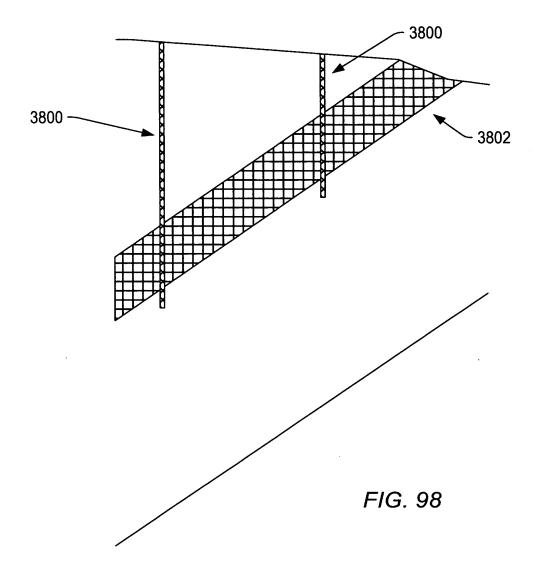
U.S. Pat. Appl. No.: 09/841,632

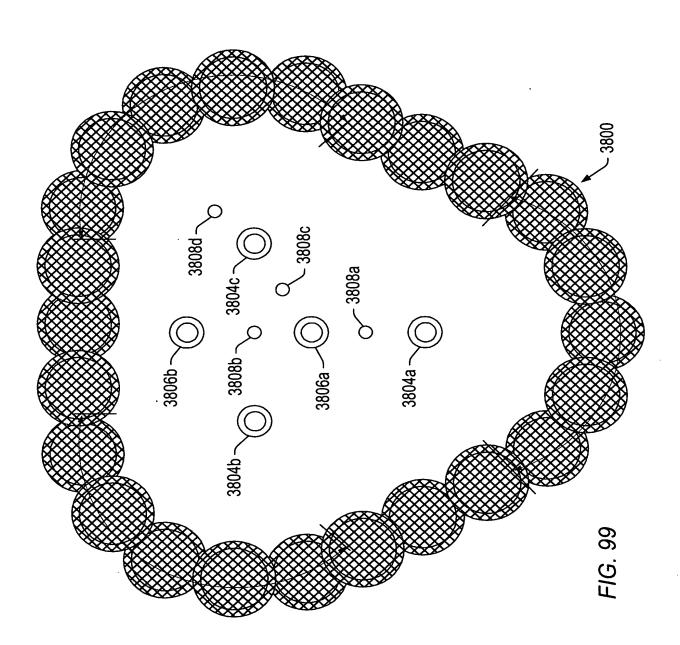


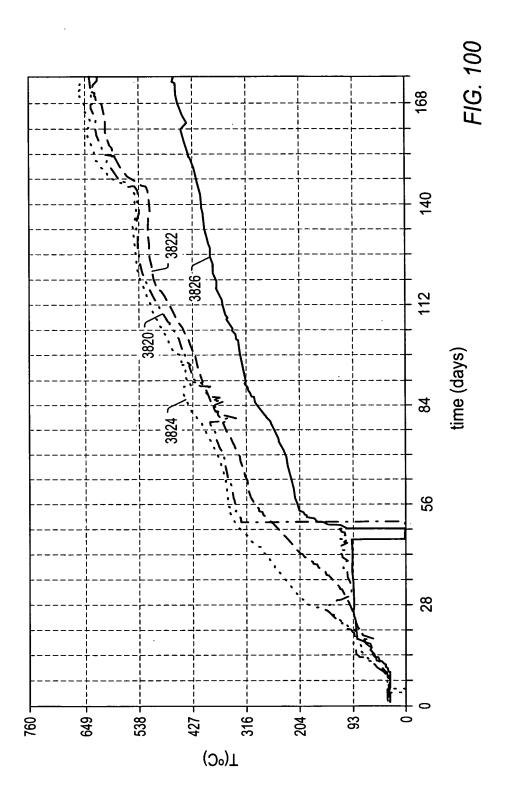
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

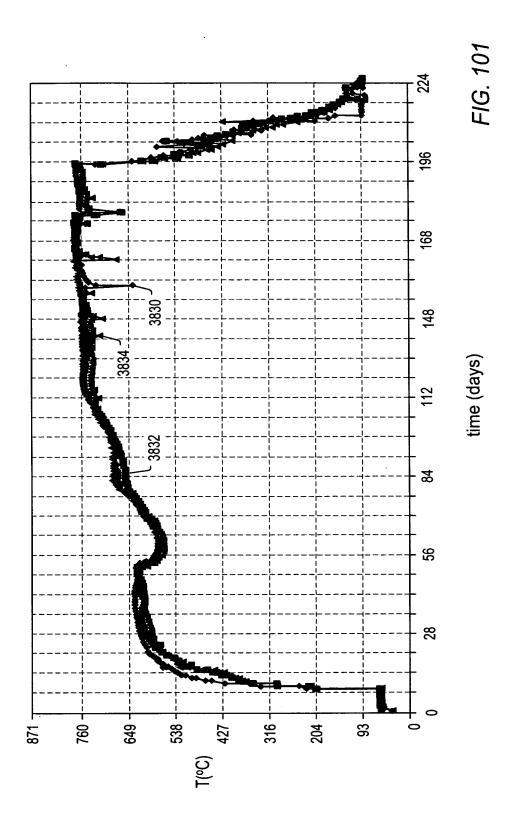


PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al.
U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet Title:

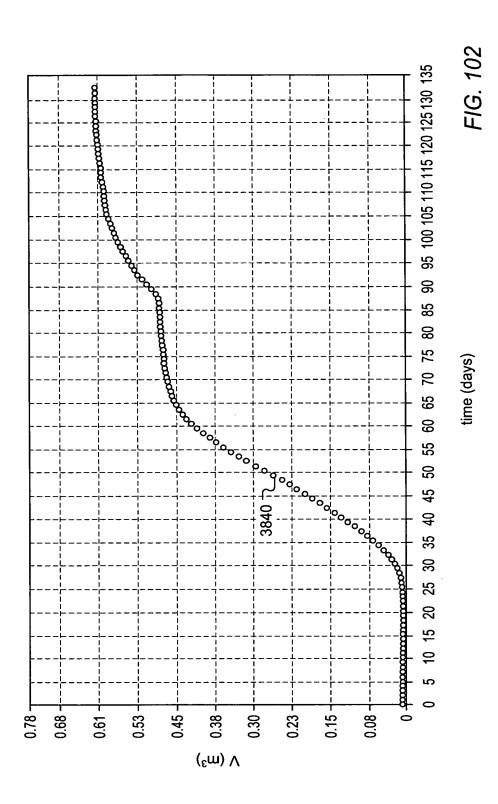






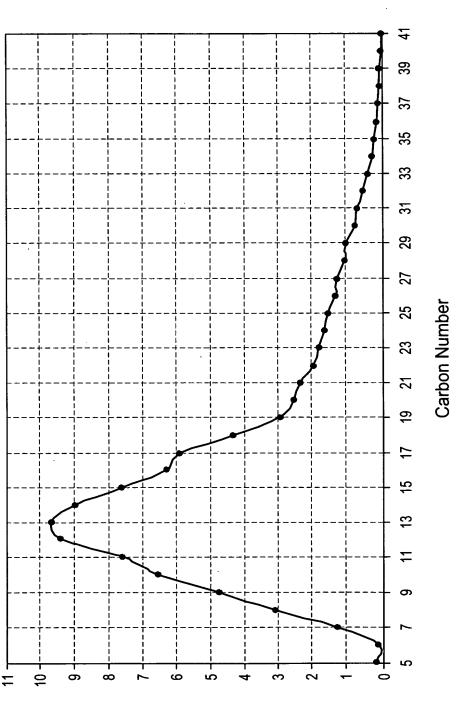


Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



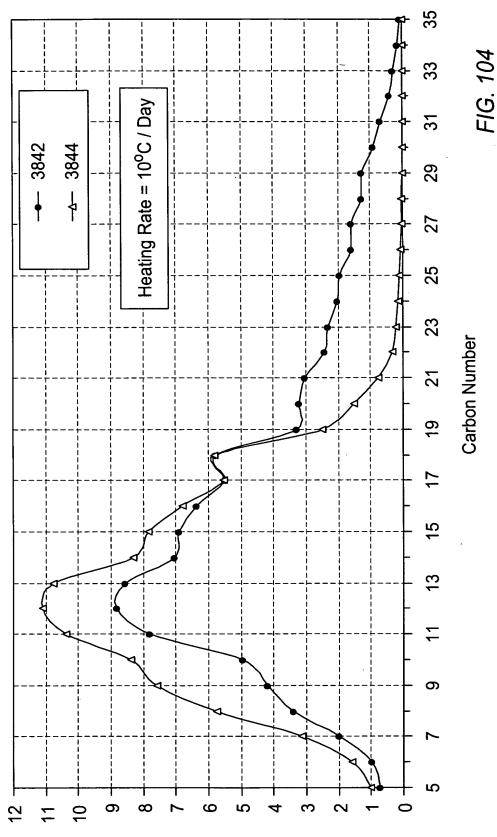
Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

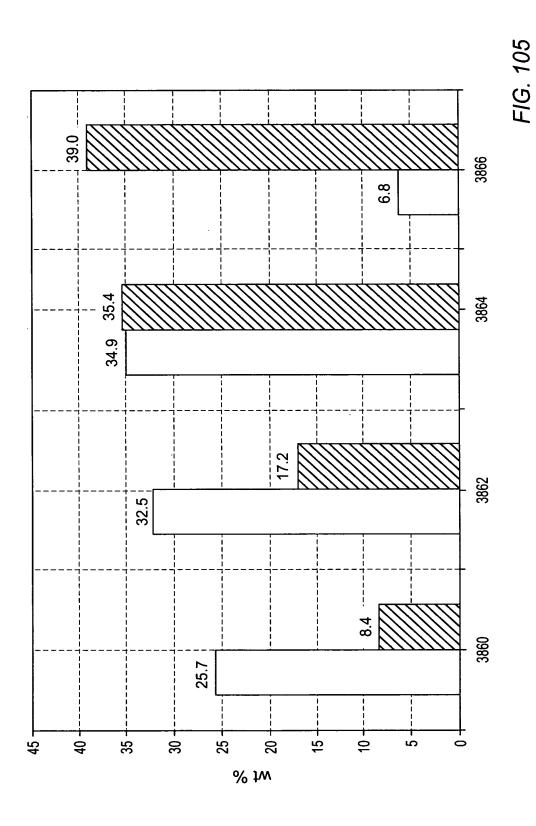


% **;**M

U.S. Pat. Appl. No.: 09/841,632



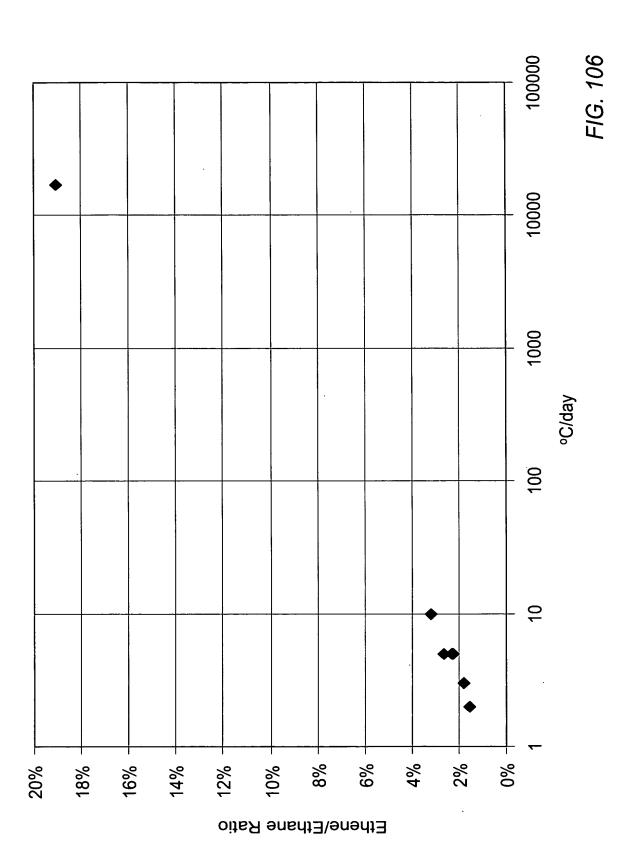
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Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al.

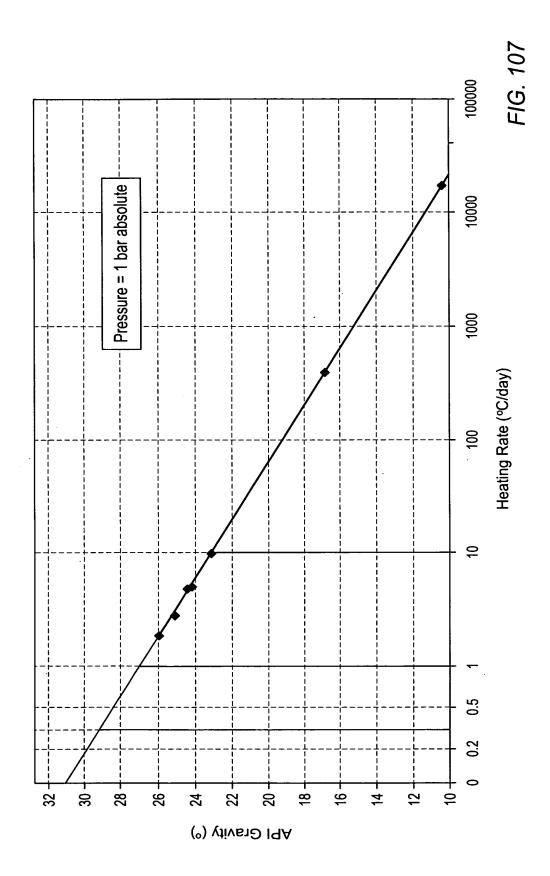
U.S. Pat. Appl. No.: 09/841,632



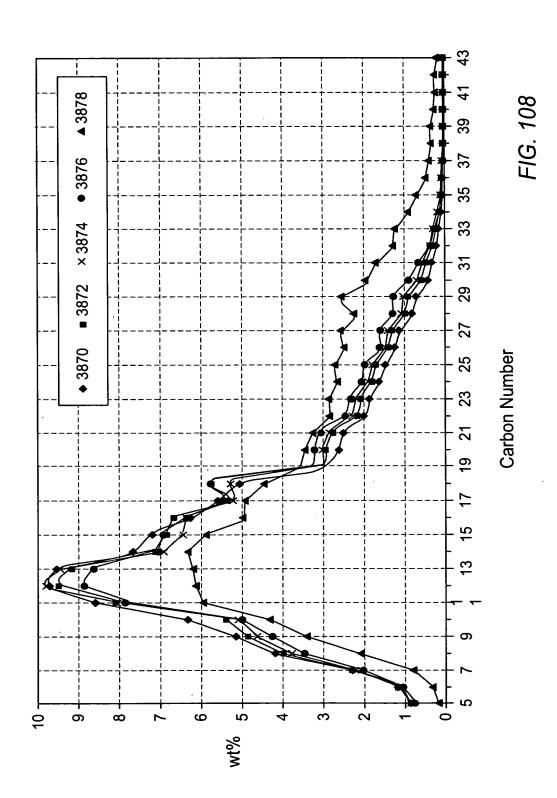
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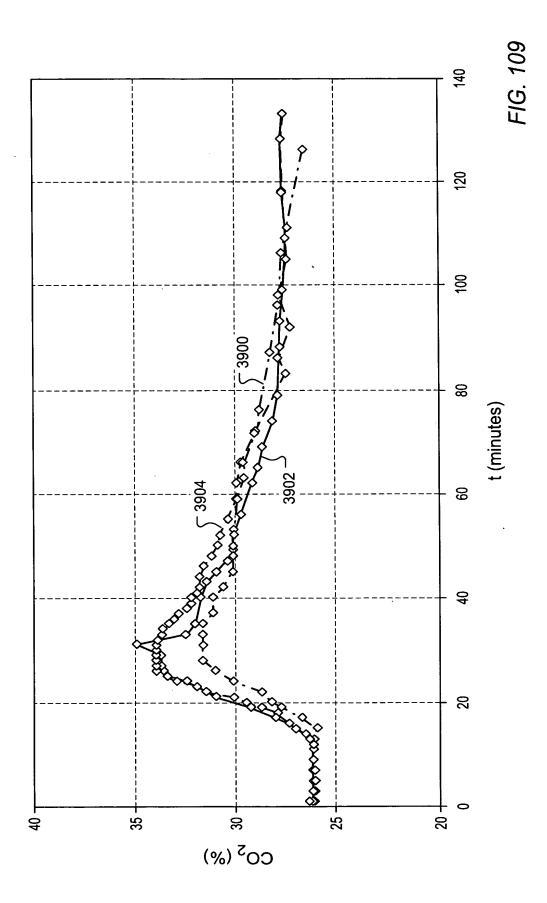
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



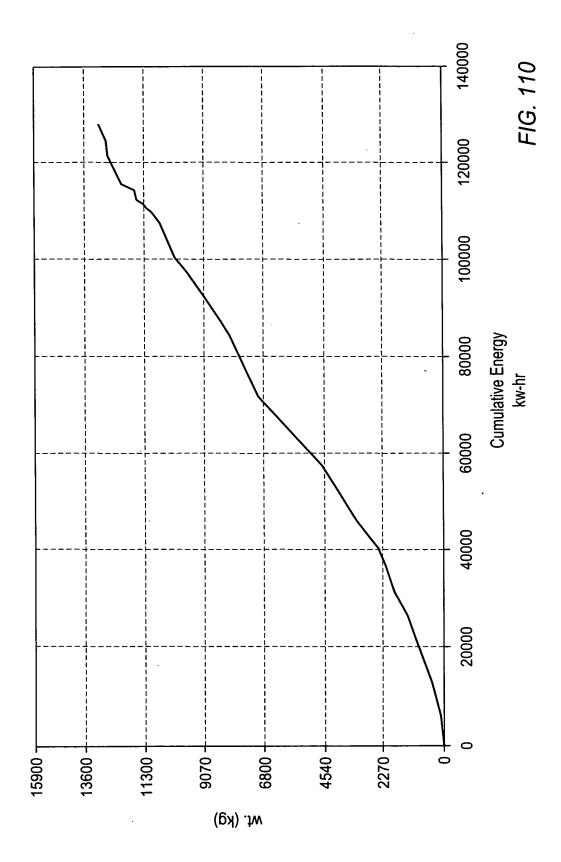
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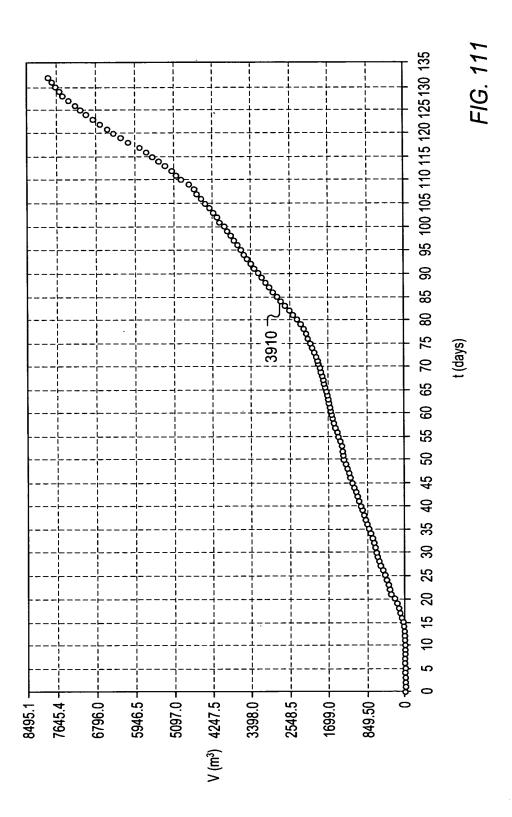


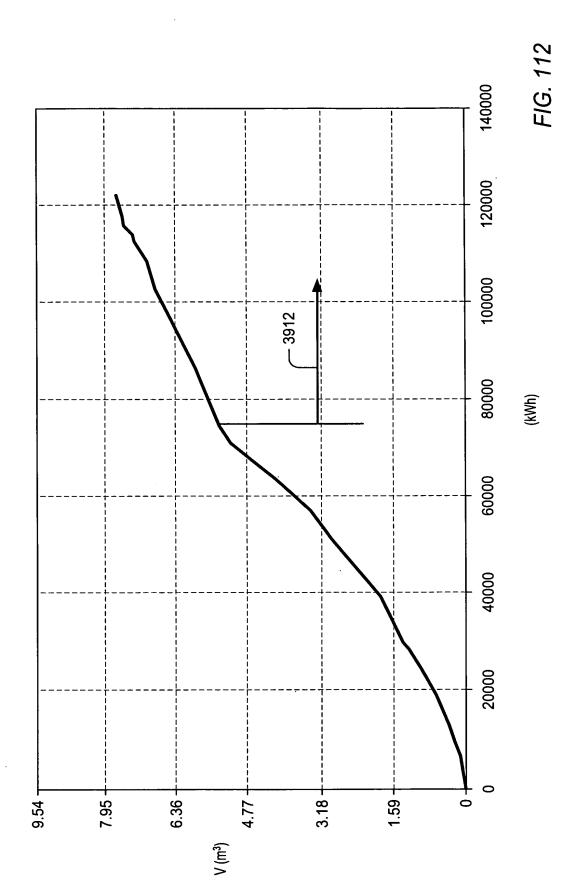
Title: PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION

Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632



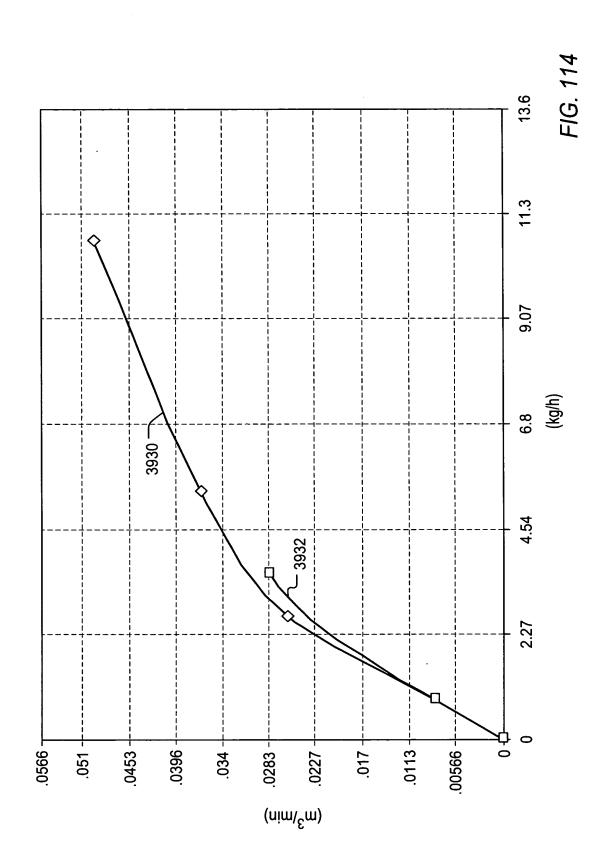


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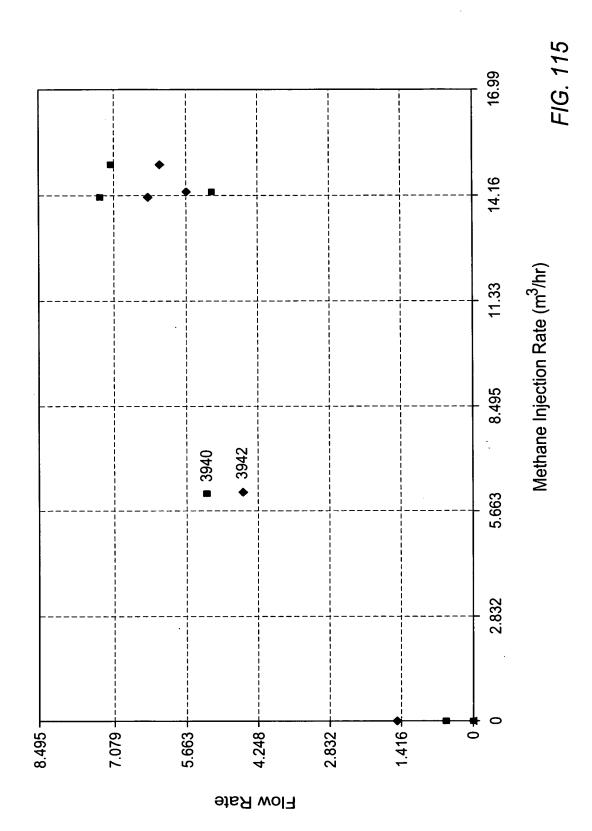
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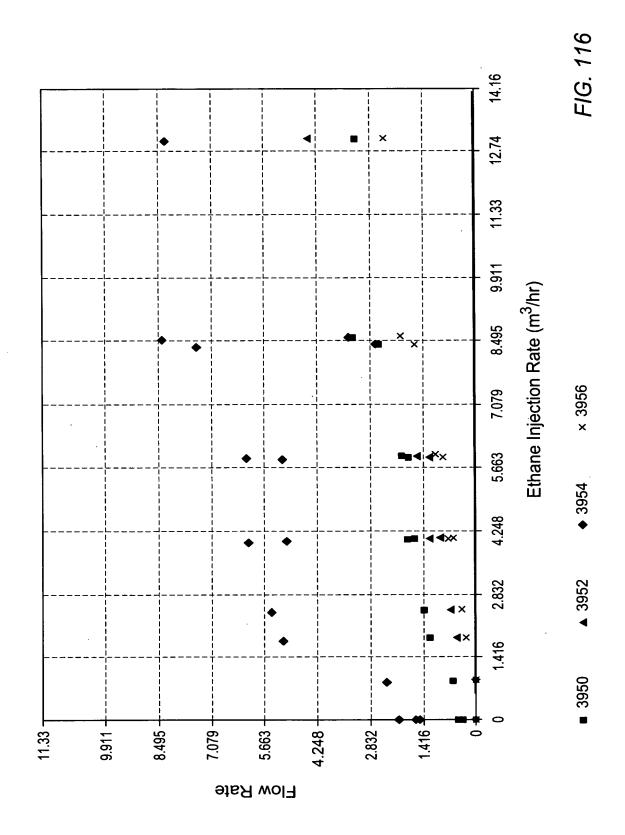
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632

Title:

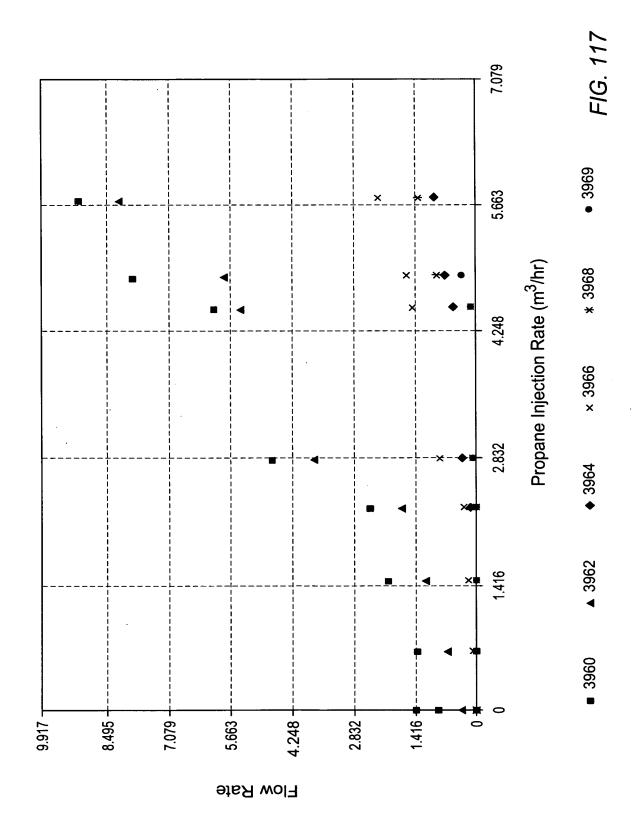


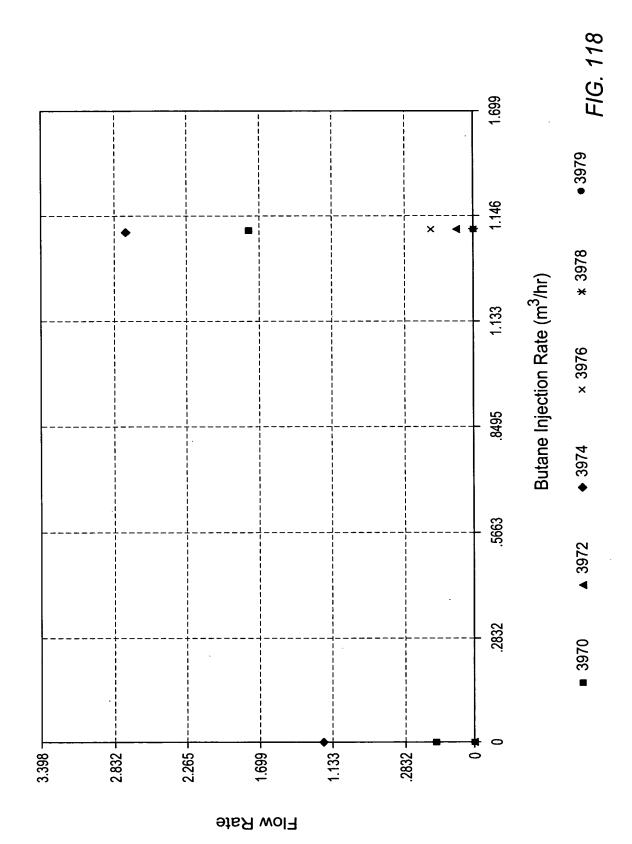
U.S. Pat. Appl. No.: 09/841,632

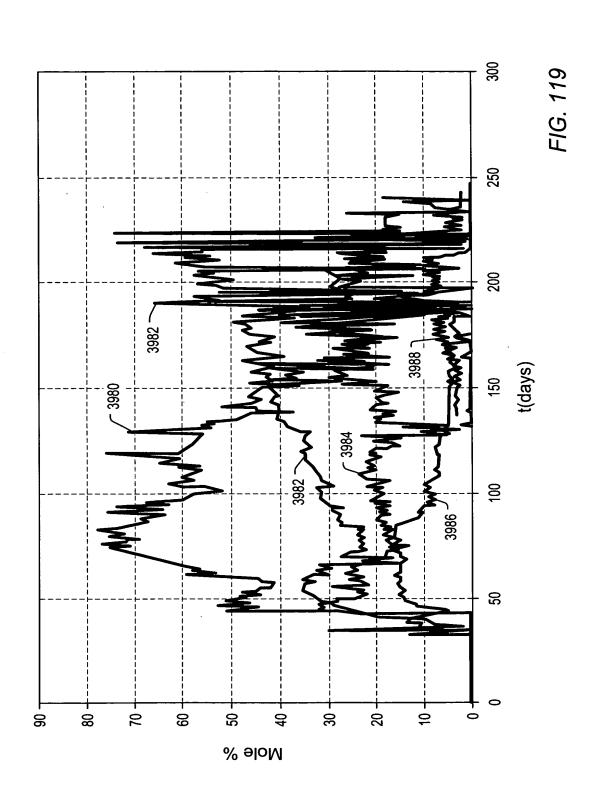


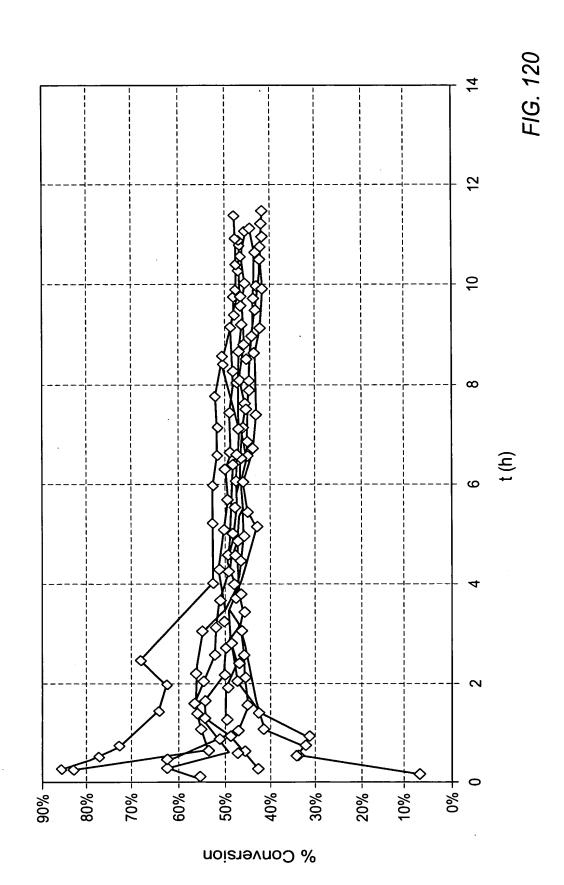


U.S. Pat. Appl. No.: 09/841,632 Replacement Sheet

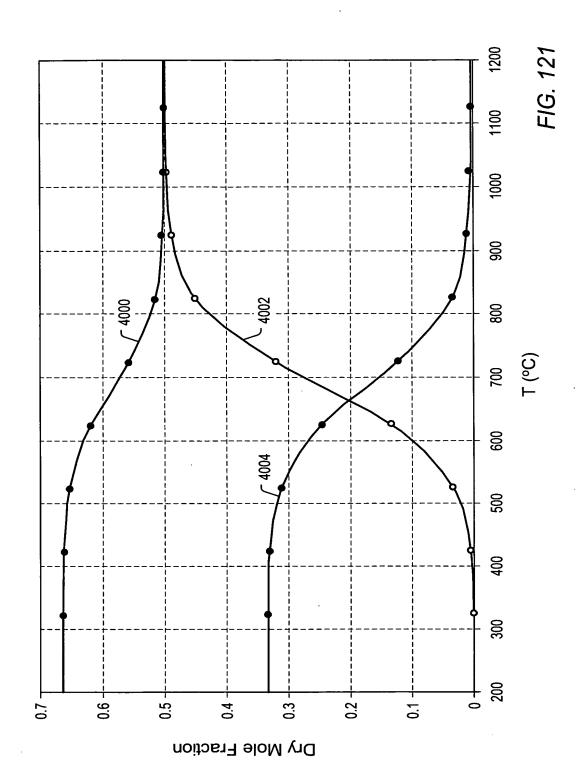




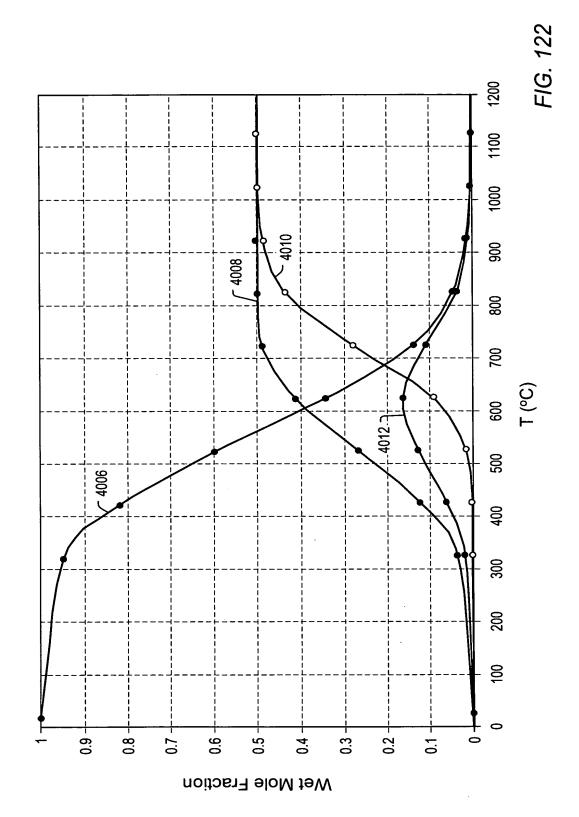


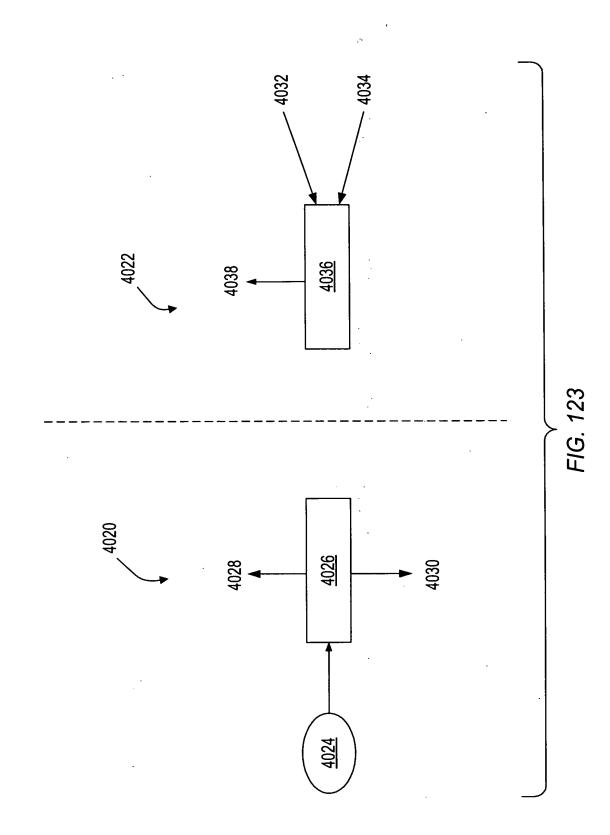


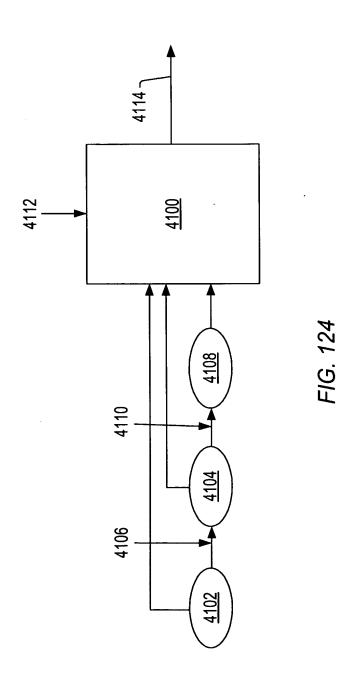
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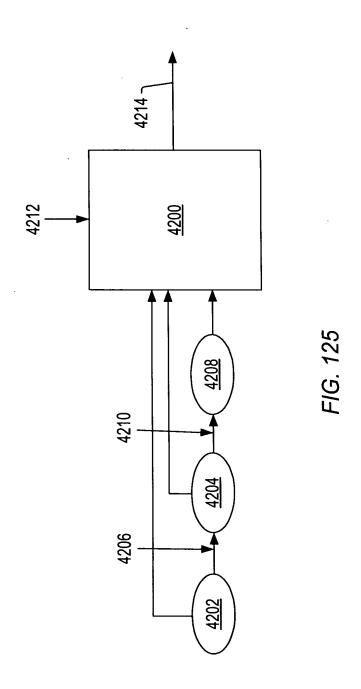


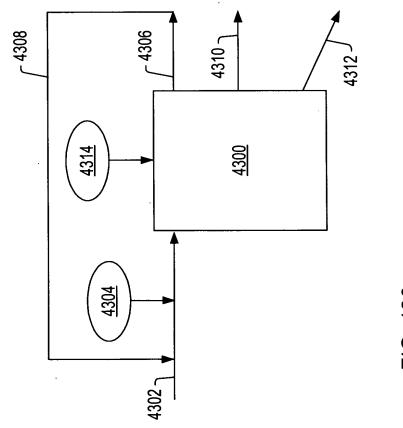
PRODUCTION OF SYNTHESIS GAS FROM A COAL FORMATION Inventors: Vinegar et al. U.S. Pat. Appl. No.: 09/841,632





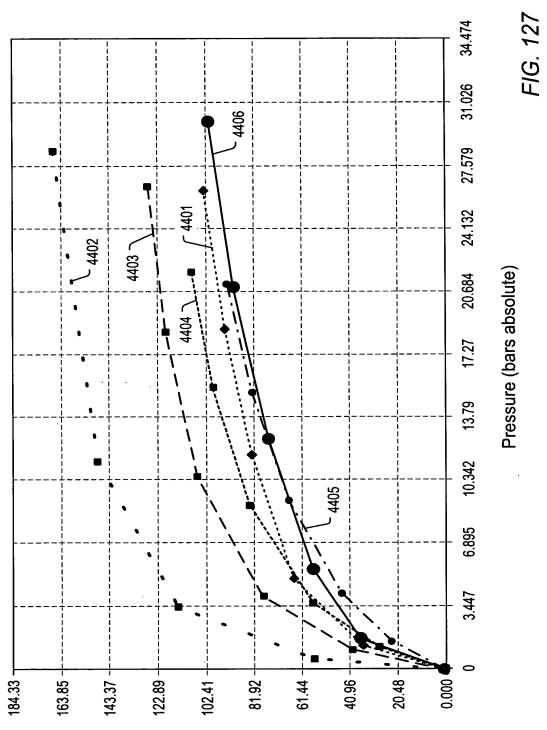




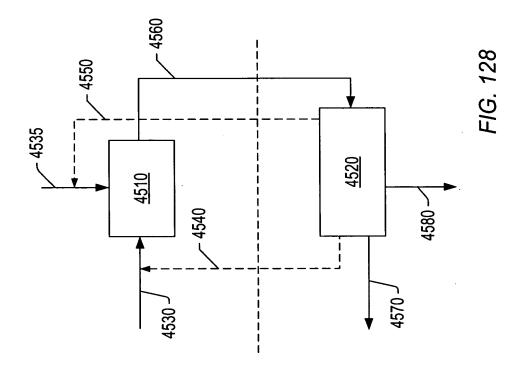


U.S. Pat. Appl. No.: 09/841,632

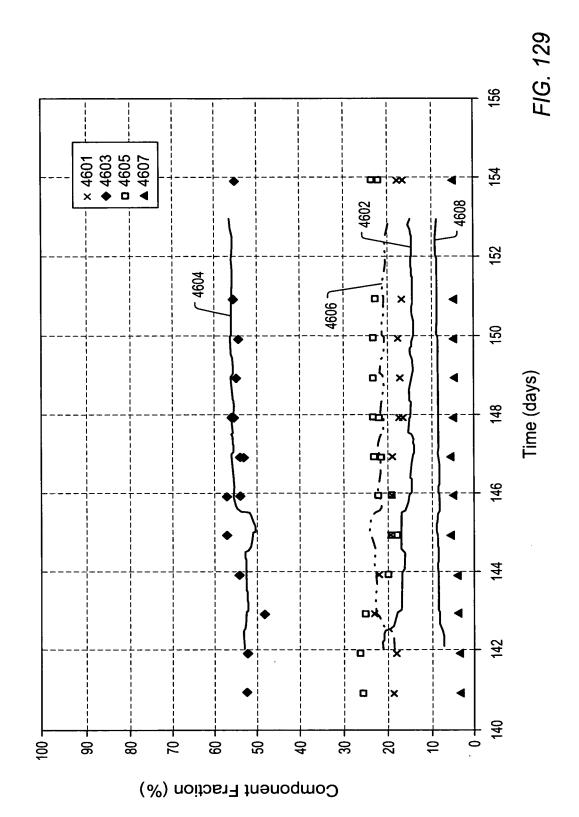
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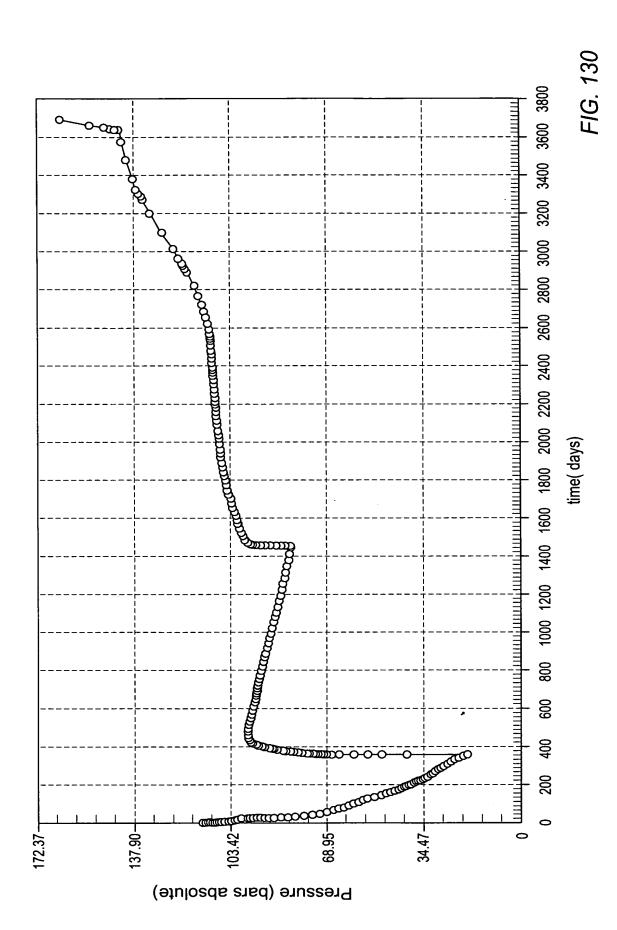
Cumulative Sorbed (m³/metric ton)



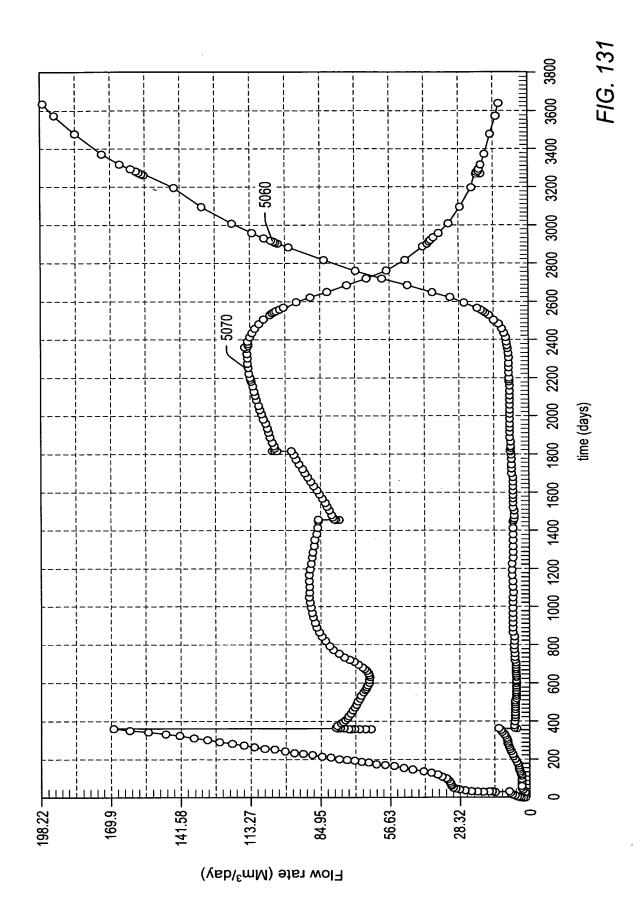
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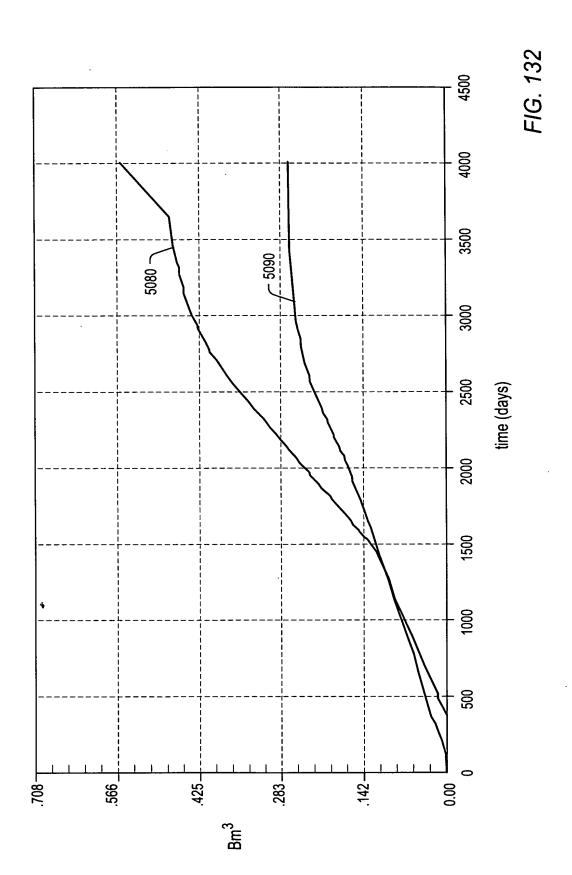


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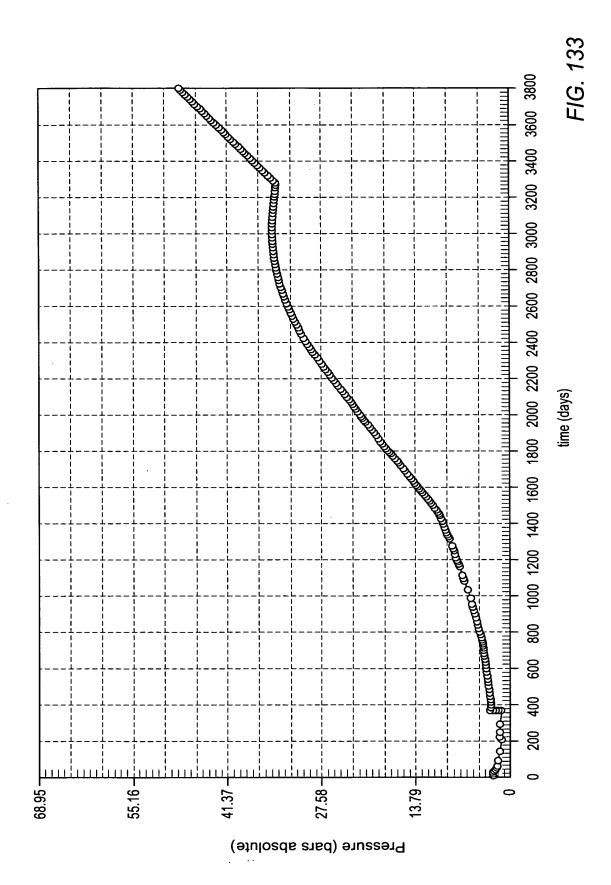


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